APEX
ENVIROTECH, INC.

11244 Pyrites Way • Gold River, CA 95670
Phone 916 851 0174 • Fax 916 851 0177 • Toll Free 1 800 242 5249

March 14, 2005

Mr. Gary Holtz
Sonoma County Department of Health Services
3273 Airway Drive, Suite D
Santa Rosa, California 95403-2097

Subject: **Sensitive Receptor Survey and Workplan for Additional Site Characterization Report**
Rotten Robbie Service Station No. 60
55 E. Todd Road, Santa Rosa, Sonoma County, California
Apex Project No. RMA01.001

Dear Mr. Holtz:

Apex Envirotech, Inc. (Apex), has been authorized by Robinson Oil Corporation (Robinson) to provide this report documenting the results of a Sensitive Receptor Survey and proposing additional site characterization activities at the subject site (Figures 1 and 2). This report was prepared in response to the Sonoma County Department of Health Services (SCDHS) letter dated December 30, 2004 (Appendix A).

This report is based in part, on information obtained by Apex from Robinson and is subject to modification as newly acquired information may warrant.

SITE DESCRIPTION

The subject property is located at 55 East Todd Road in Santa Rosa, Sonoma County, California. The site has historically been operated as Dave's Pit Stop, a retail automotive and truck fueling station and convenience store.

BACKGROUND

August 18, 2003 - RM Associates (RMA) supervised the installation of eight soil borings at the subject property as part of a Phase II Environmental Site Assessment conducted in association with the sale of the property from Mr Dave Zedrick to Robinson. RMA collected soil samples from three of the borings and groundwater samples from all eight of the borings. RMA documented the results in, *Report of Phase II Environmental Site Assessment*, dated October 13, 2003.

September 9, 2003 - SCDHS requests a workplan to investigate the site further.

November 4 - 5, 2003 - Soil and pavement were excavated from above the former gasoline and diesel underground storage tanks (UST). The materials were stored on site and RMA sampled the stockpiled soil on November 6, 2003. Upon completion of analysis and profiling stockpiled materials were removed from the site, and properly disposed.

November 7, 2003 - Armer/Norman and Associates removed the five former USTs. No holes were noted in any of the USTs. Under the direction of the Sonoma County Department of Emergency Services and the SCDHS, RMA collected confirmation soil samples from the UST basin. Ecology Control Industries under Uniform Hazardous Waste Manifests hauled the USTs offsite.

November 10, 2003 - RMA collected five 4:1 composite soil samples from the stockpiled soil that had been removed from the new UST location.

December 3, 2003 - The former product lines and dispensers were removed. RMA collected confirmation samples and six 4:1 composite samples from the stockpiled soil.

January 16, 2004 - RMA documented the results of the UST removal and replacement, *Report of Underground Storage Tank Removal*.

February 23, 2004 - Apex submitted, *Workplan for Preliminary Site Assessment,* outlining the installation and sampling of 10 direct-push soil borings and four groundwater monitoring wells. The SCDHS approved the Workplan in a letter dated March 9, 2004.

June 15 - 16, 2004 - Apex supervised the installation of nine direct-push soil borings (GP-1, GP-3 through GP-10) to delineate the lateral and vertical extent of soil and groundwater contamination beneath the site. GP-1, GP-3, GP-4 and GP-6 through GP-10 were advanced to a total depth of 12 feet below ground surface (bgs), and GP-5 was advanced to a total depth of 20 feet bgs.

July 7 - July 9, 2004 - Apex personnel supervised utility vacuum clearing , drilling, sampling, installation of four groundwater monitoring wells (MW-1 through MW-4), and surveying activities.

November 9, 2004 - Apex submitted the report, *Preliminary Site Assessment Results Report and Fourth Quarter 2004 Groundwater Monitoring Report,* detailing activities and results for boring and monitoring well installation activities.

December 30, 2004 - SCDHS requested a workplan to complete additional characterization of the site. In addition, the SCDHS requested that a sensitive receptor survey be conducted (Appendix A).

SENSITIVE RECEPTOR SURVEY

Wells

On February 10, 2005, Apex personnel conducted a door-to-door survey within 250-feet of the subject site to identify any existing wells. No basements and no other wells, besides the one onsite domestic well, were located within a 250-foot radius of the site.

On February 17, 2005, Apex personnel conducted a well search with the Department of Water Resources (DWR) to identify wells with a 2,000-ft radius of the subject site. Six wells were identified as on record with the DWR within this radius (Table 1). In addition Apex personnel located one undocumented well within the 2,000-foot radius of the site. A map showing the eight well locations and copies of the borings logs for the eight documented wells are presented in Appendix B.

Surface Waters

A review of maps and onsite investigation showed a drainage canal located approximately 23-feet to the east of the site (Figure 3). The canal flows under Todd Road and continues to the south along Highway 101.

Underground Utilities

On February 10, 2005, Apex personnel conducted a utility search to determine the presence of preferential pathways of migration. Figure 2 shows the approximate locations of the surrounding utility vaults. The most recent groundwater gradient is to the southwest. The latest groundwater gradient map for the first quarter 2005 monitoring event is presented as Figure 4.

Domestic Well Sampling

On February 9, 2005, Apex personnel conducted a sampling of the domestic well located on the subject property. Sampling was performed in accordance with Apex standard operating procedures (SOP) (Appendix C). All constituents of concern were below laboratory detection limits (Table 2). A copy of the laboratory analytical report and chain-of-custody (COC) form are included in Appendix D.

SITE CHARACTERIZATION

The purpose of this phase of site activities is to complete characterization of the site by delineating the lateral and vertical extent of groundwater contamination in soil and groundwater.

Site Geology and Hydrogeology

Groundwater monitoring well boring logs (Appendix E) show the presence of tighter silt and clay units capping the site and approximately 10-feet thick. Underlying this unit is a sandy to clayey gravel that extends to first groundwater. First encountered groundwater occurs across the site at approximately 20-feet bgs. The bottom of the aquifer has not yet been determined.

Depth to water data collected during the fourth quarter 2004, and first quarter 2005 events show that the aquifer is confined (Table 3), with flow gradient trending toward the southwest as shown in Figures 4 and 5.

Based on first quarter groundwater analytical results, found in Table 2, total petroleum hydrocarbons (TPH) as gasoline and diesel and benzene are not defined downgradient of the site. In addition the MTBE plume is not defined in either the up or downgradient directions.

As per the SCDHS letter, dated December 30, 2004, Apex proposes the following activities to delineate the extent of hydrocarbons in soil in the areas of borings GP-1, GP-5 and well MW-2, and to attempt to define the hydrocarbon plume in the up-, down- and cross-gradient directions.

Additional Direct-Push Soil Borings Installations

To address the vertical extent of residual hydrocarbons in soil in the areas of GP-1, GP-5 and well MW-2, Apex proposes to drill and sample three additional direct-push soil borings (GP-1B, GP-5B and GP-11) as shown on Figure 3. The borings will be advanced and continuously sampled to the base of the first aquifer. Once the aquitard is encountered, the borings will be terminated.

To delineate the vertical extent of residual hydrocarbons in soil, a soil sample will be collected from each boring, just within the confining unit and submitted, under COC, to California Laboratory Services (CLS) of Rancho Cordova, a California a state-certified laboratory.

All soil samples will be submitted for analysis of:

Analysis	Abbreviation	Designation	USEPA Method No.
Total Petroleum Hydrocarbons as Gasoline	TPHg	Gas and Diesel Range Hydrocarbons	8015 Modified
Total Petroleum Hydrocarbons as Diesel	TPHd		
Benzene	BTEX	Aromatic Volatile Organics	8021
Toluene			
Ethylbenzene			
Xylenes (Total)			
Tertiary Butyl Alcohol	TBA	Seven Fuel Oxygenates	8260B
Methyl Tertiary Butyl Ether	MTBE		
Di-isopropyl Ether	DIPE		
Ethyl Tertiary Butyl Ether	ETBE		
Tertiary Amyl Methyl Ether	TAME		
Methanol			
Ethanol			
1,2-Dichloroethane	1,2 DCA	Lead Scavengers	
1,2-Dibromoethane	EDB		

All sampling will be done in accordance with the Apex SOP (Appendix C).

Additional Groundwater Monitoring Wells Installation

Apex proposes to drill, sample and construct five additional groundwater monitoring wells (MW-5, through MW-9) as noted in Figure 3. Though four of these wells had been previously proposed (MW-5 through MW-8), the well locations have been modified to better address down-gradient and cross-gradient concerns.

Wells MW-5 through MW-9 will be completed as 2-inch groundwater monitoring wells, with 0.020-inch slot well screen, and a #3 sand filter pack. Based on prior well installation activities for wells MW-1 through MW-4, first groundwater is expected at 20-feet bgs. Each boring for will be advanced to a depth of 25-feet bgs. The wells will then be screened from 3-feet bgs to total depth. Given the confined nature of the aquifer, this will ensure that well screens are not submerged.

Apex personnel will collect soil samples from each of the monitoring well borings at 5-foot intervals beginning at 5-feet bgs. Soil lithology and visual and olfactory observations will be recorded in the field. In addition, all soil samples will be field screened with a photo ionization device. All fieldwork will be conducted in accordance with the Apex SOP included in Appendix C. Soil encountered during the installation of the wells and borings will be logged according to the unified soil classification system, under the supervision of a State of California registered professional geologist.

A minimum of two soil samples from each boring will be submitted, under COC to CLS of Rancho Cordova. Soil samples will be analyzed for the constituents listed in the table above.

Stockpile and Rinsate Water Disposal

Soil cuttings generated during drilling activities will be stored on and covered with visqueen onsite. Rinsate water will be stored on-site in 55-gallon metal drums. Apex will collect one composite sample from both the soil stockpile for disposal purposes. The composite sample will be submitted, under COC to CLS of Rancho Cordova, and analyzed for total lead and the constituents listed in the table above. Upon receipt of analytical results, Apex will coordinate the disposal of both the soil and rinsate water.

SCHEDULE OF OPERATIONS

Upon receipt of written approval of this Workplan, Apex will implement the work in accordance with the following schedule:

- Upon receiving written approval of this workplan permit applications will be prepared and submitted to all appropriate agencies (Caltrans and SCDHS).
- Within 21 calendar days of receiving the required permits, drilling and installation of the soil borings and new groundwater monitoring wells will be completed.
- Within 21 calendar days of installation of the new groundwater monitoring wells, the wells will be developed, surveyed and sampled.
- Within 30 days of receiving laboratory analysis results, a report documenting investigation activities and results will be submitted to the SCDHS.

REPORT DISTRIBUTION:

Apex submitted copies of this report to:

Mr. Gary Holtz
Sonoma County Department of Health Services
3273 Airway Drive, Suite D
Santa Rosa, California 95403-2097

Mr. Luis Rivera
North Coast Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403

Mr. Tom Robinson
Robinson Oil Corporation
4250 Williams Road
San Jose, California 95129

Mr. Ron Michelson
RM Associates
16401 Meadow Vista Drive, Suite 102
Pioneer, California 95666

Mr. Dave Zedrick
P.O. Box 7010
Santa Rosa, California 95407

REMARKS/SIGNATURES

The information contained in this report reflects our professional opinions and was developed in accordance with currently available information, and accepted hydrogeologic and engineering practices. This report was prepared solely for the use of Robinson Oil Corporation. Any reliance on this report by parties other than Robinson Oil Corporation shall be at their own risk.

The work described in the above report was performed under the direct supervision of a professional geologist, registered with the State of California, whose signature appears below.

We appreciate the opportunity to provide Robinson Oil Corporation with geologic, engineering, and environmental consulting services, and trust this report meets your needs. If you have any questions or comments, please call us at (916) 851-0174.

Sincerely,

APEX ENVIROTECH, INC.

Rebekah A. Westrup
Project Manager

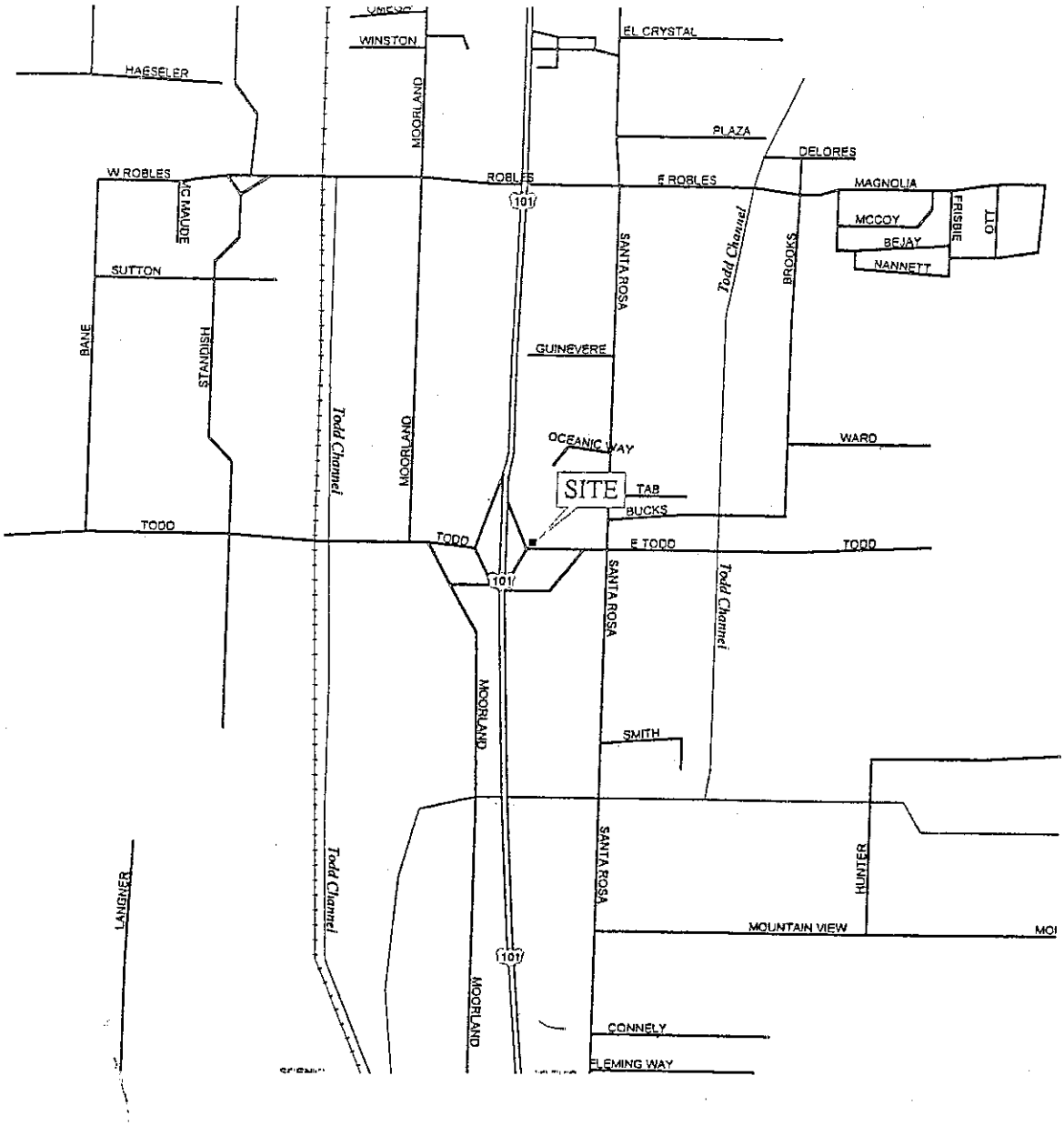
Michael S. Sgourakis, R.G.
Senior Project Manager
RG No. 7194

FIGURES:

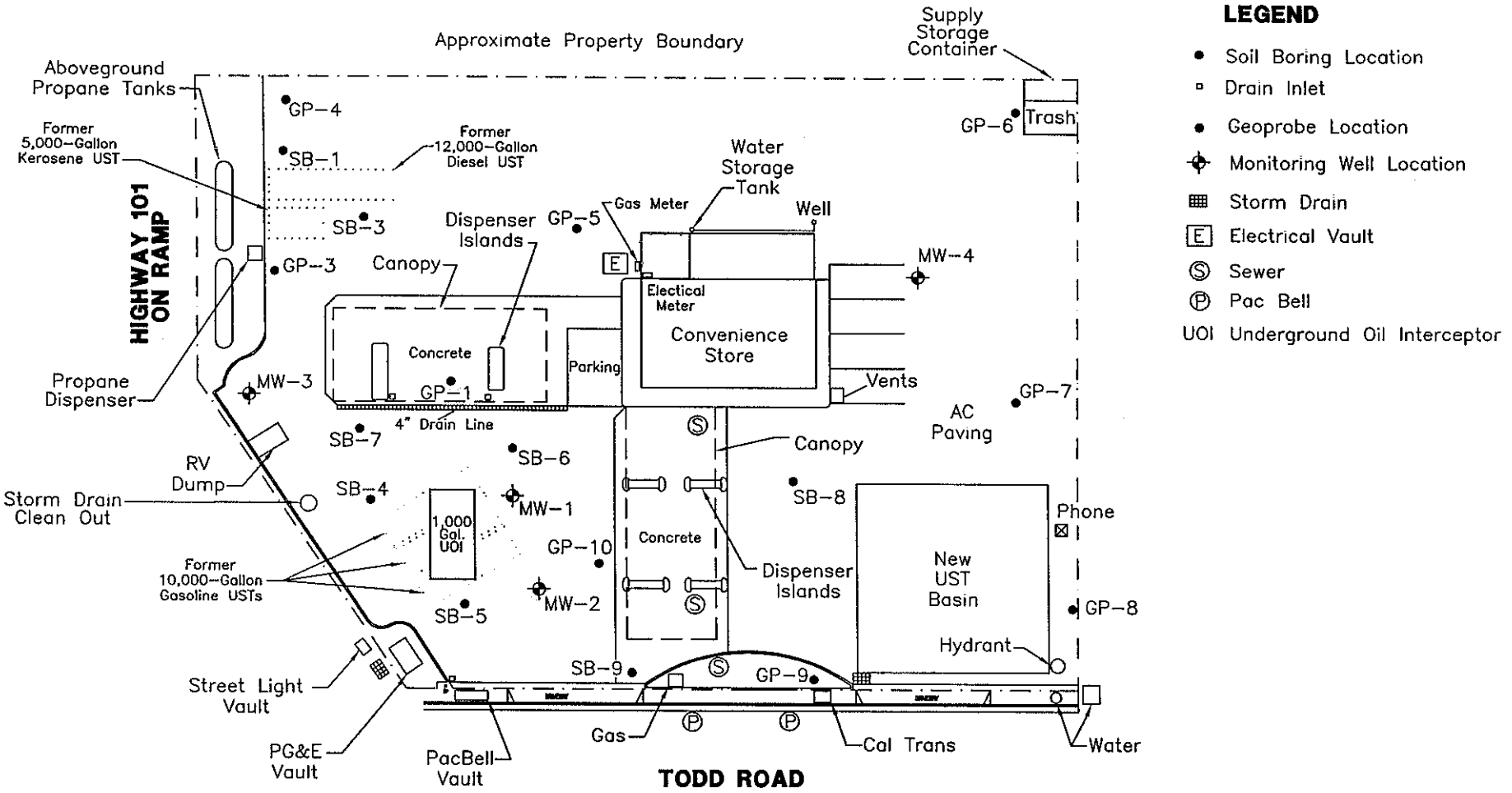
TABLE:

APPENDICES:

FIGURES



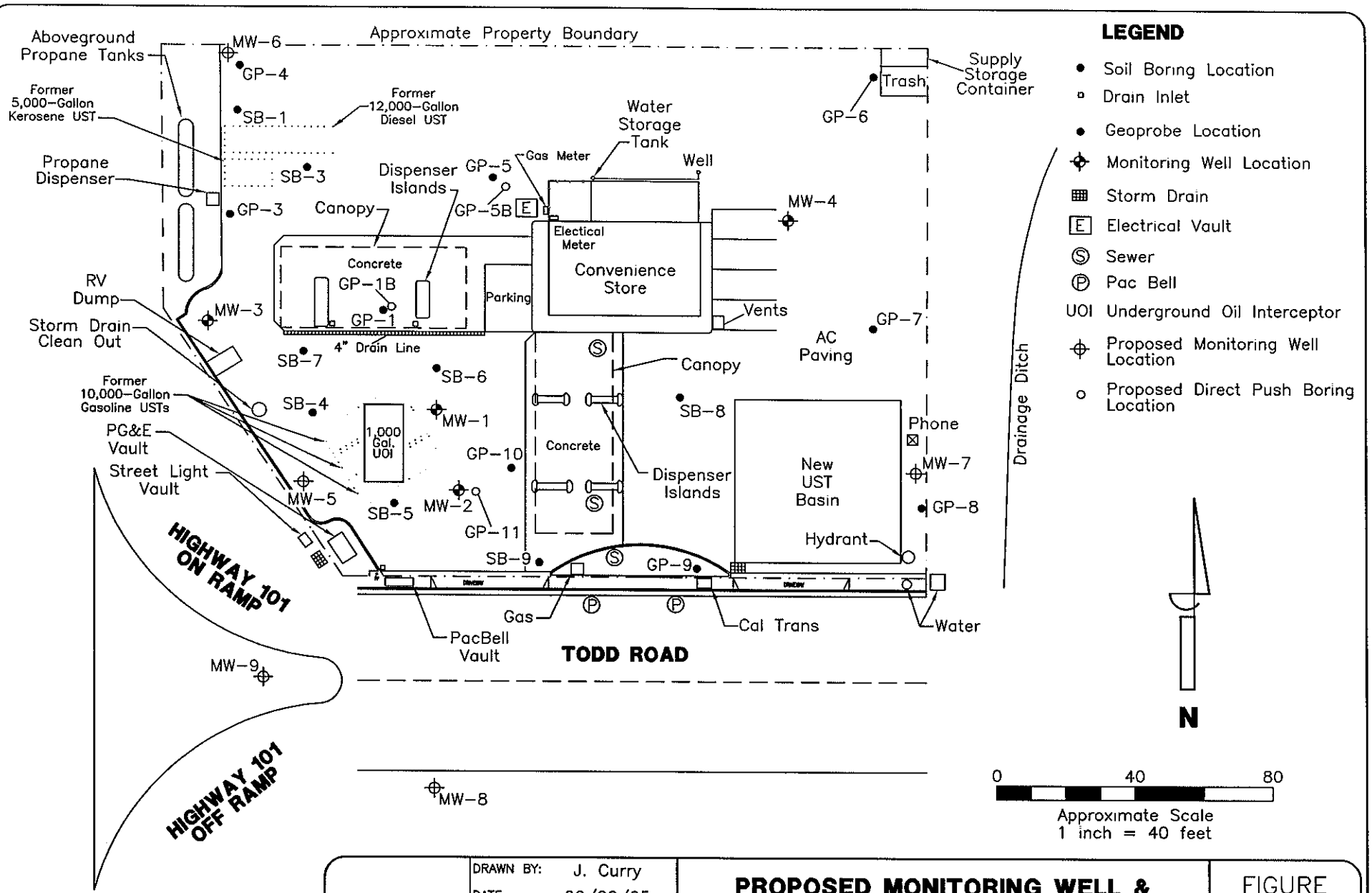
APEX ENVIROTECH INC	DRAWN BY: D. Alston DATE: 2/10/04 REVISIONS	**SITE VICINITY MAP** Rotten Robbie Service Station No. 60 55 Todd Road Santa Rosa, California	FIGURE **1** PROJECT NUMBER: RMA01.001



LEGEND

- Soil Boring Location
- Drain Inlet
- Geoprobe Location
- Monitoring Well Location
- Storm Drain
- E Electrical Vault
- S Sewer
- P Pac Bell
- UOI Underground Oil Interceptor

APEX ENVIROTECH, INC.	DRAWN BY: J. Curry DATE: 02/21/05 REVISIONS	**SITE PLAN MAP** Rotten Robbie Service Station No. 60 55 Todd Road Santa Rosa, California	FIGURE **2** PROJECT NUMBER: RMA01.001



APEX ENVIROTECH, INC.

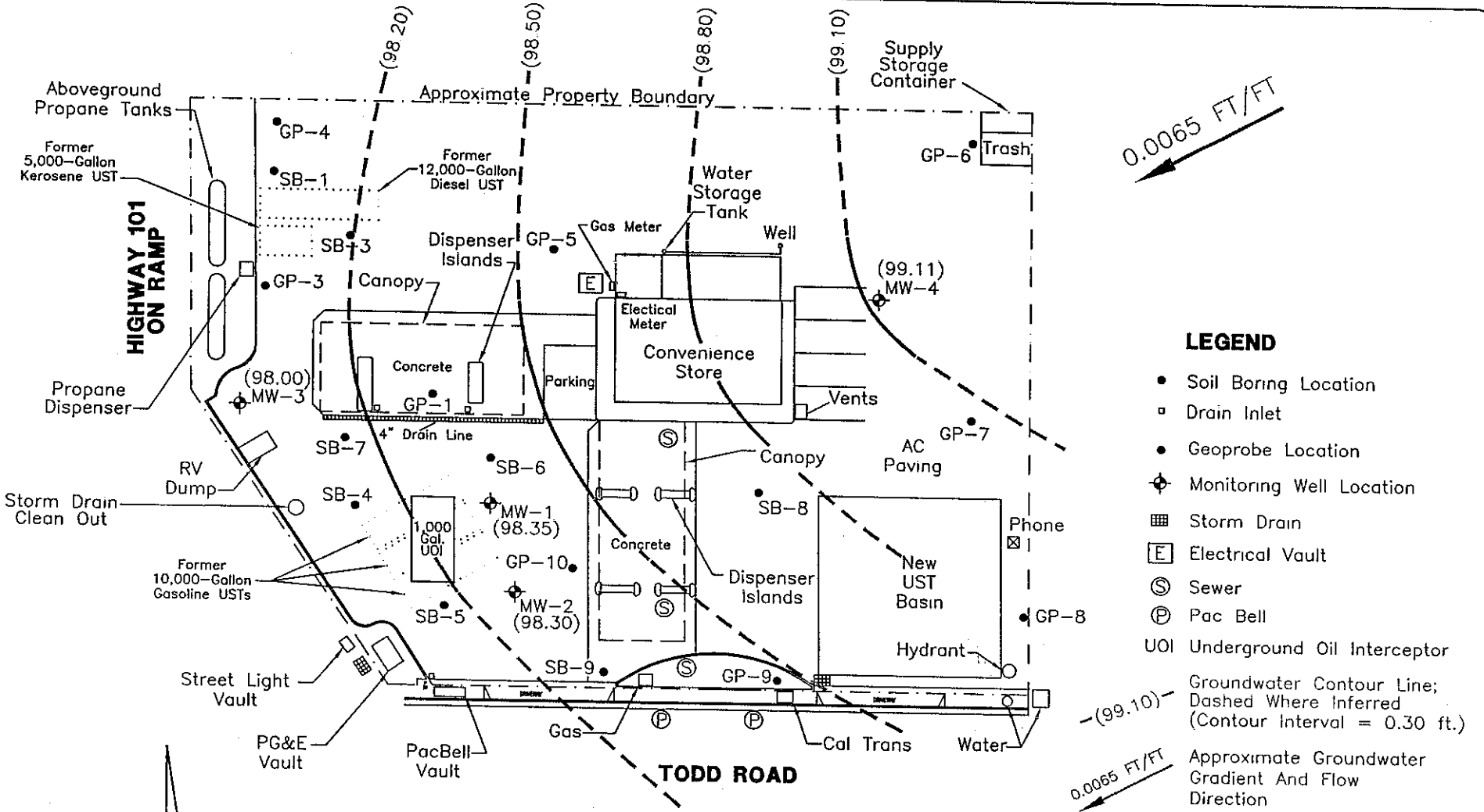
DRAWN BY: J. Curry
DATE: 02/22/05
REVISIONS

PROPOSED MONITORING WELL & DIRECT PUSH BORING LOCATIONS MAP

Rotten Robbie Service Station No. 60
55 Todd Road
Santa Rosa, California

FIGURE
3

PROJECT NUMBER:
RMA01.001



APEX ENVIROTECH, INC.

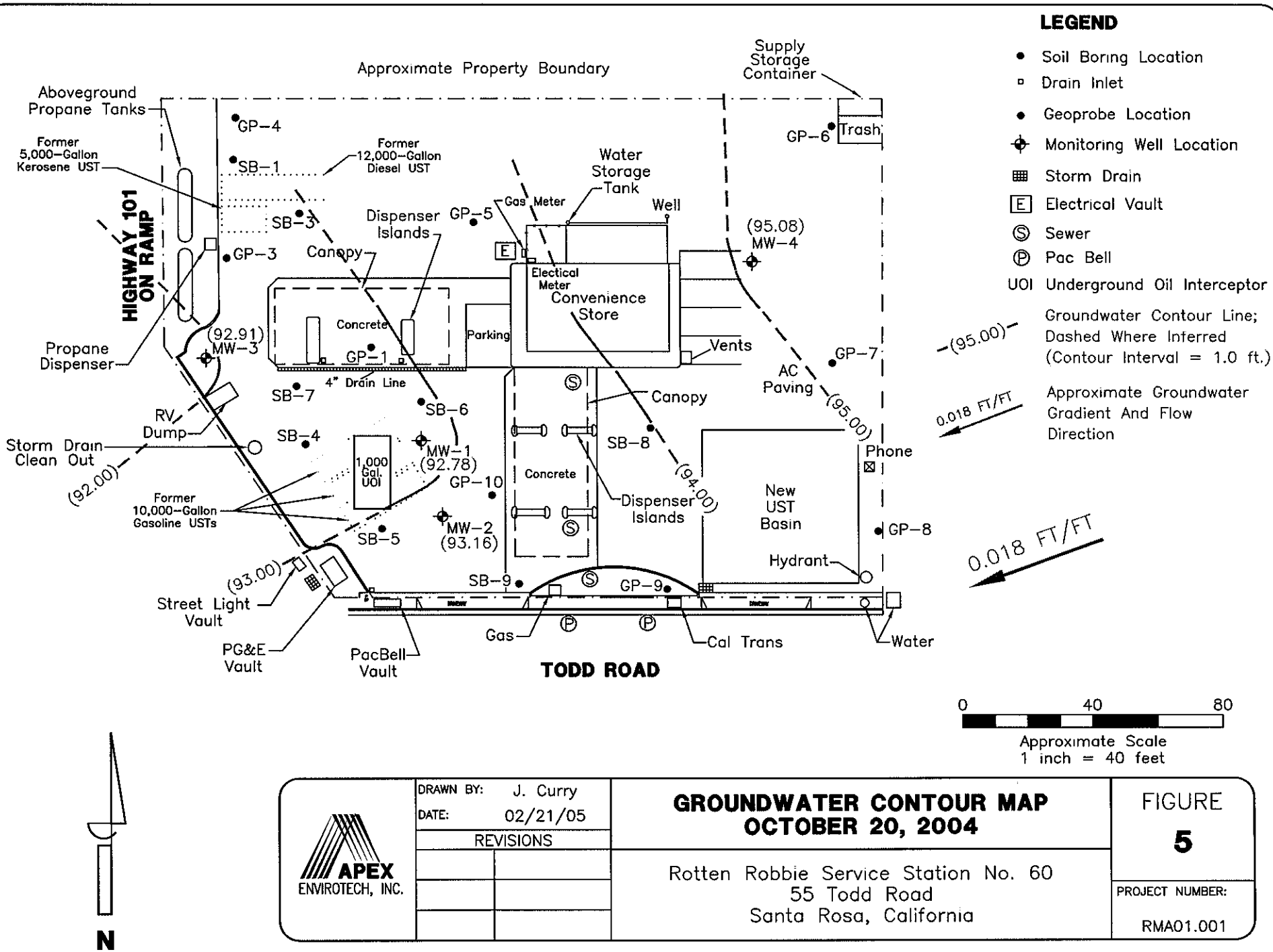
DRAWN BY:	J. Curry
DATE:	02/21/05
REVISIONS	

GROUNDWATER CONTOUR MAP FEBRUARY 9, 2005

Rotten Robbie Service Station No. 60
55 Todd Road
Santa Rosa, California

FIGURE 4

PROJECT NUMBER: RMA01.001



APEX ENVIROTECH, INC.

DRAWN BY:	J. Curry
DATE:	02/21/05
REVISIONS	

GROUNDWATER CONTOUR MAP OCTOBER 20, 2004

Rotten Robbie Service Station No. 60
55 Todd Road
Santa Rosa, California

FIGURE 5

PROJECT NUMBER: RMA01.001

TABLES

TABLE 1
WELL SEARCH DATA
Rotten Robbie Service Station No. 60
55 East Todd Road
Santa Rosa, California

Well Plot No.	Well Owner	Time Installted	Section	Type	Total Depth (feet)	Screen Inteval (feet)	Casing (feet)	Initial Depth to GW (feet)	Static Depth to GW (feet)	Well Location
1	Hogue Equipment Co., Inc.	10/6/1976	6N8W11	domestic	148	90-110 / 130-148	0-148	41	---	3939 South Moorland Ave
2	Bartley Pump Inc.	6/12/1975	6N8W11	Industrial	110	70-90	0-110	10	20	4000 South Moorland Ave
3	Mountain Road	11/17/1980	6N8W2	Industrial	77	58-78	0-78	20	---	3675 Santa Rosa Ave
4	Norman Siler	8/22/1978	6N8W2	domestic	130	80-120	0-130	32	24	3534 Santa Rosa Ave
5	Eimer Harjak	2/28/1967	6N8W2	domestic	60	35-60	0-59	13	---	3560 Moorland Ave
6	Industrial Carting	6/28/1984	6N8W11	domestic	95	35-55 / 75-95	0-95	18	15	3911 Santa Rosa Ave
A	Tower Mart	---	---	---	---	---	---	---	---	3825 Santa Rosa Ave
B	Rotten Robbie	---	---	---	---	---	---	---	---	55 Todd Road

Note:
--- - Status unknown
GW - Groundwater

TABLE 2
GROUNDWATER ANALYTICAL DATA
Rotten Robbies
55 Todd Road
Santa Rosa, California

Sample ID	Date Collected	TPH as		Aromatic Volatile Organics				Seven Oxgenates							Lead Scavengers	
		Gasoline (ug/L)	Diesel (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)	DIPE (ug/L)	ETBE (ug/L)	MTBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Methanol (mg/L)	Ethanol (mg/L)	1,2-DCA (ug/L)	EDB (ug/L)
DW-1	02/09/05	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	7.0	<0.50	<5.0	<2.0	<2.0	<0.50	<0.50
MW-1	07/29/04	13,000	11,000	280	860	470	2,700	<40	<40	1,300	<40	<400	<2.0	<2.0	<40	<40
	10/20/04	3,200	19,000	150	340	190	760	<0.50	<0.50	8,100	180	3,400	5.6	3.8	2.0	---
	02/09/05	**24,000**	**3,400**	**1,300**	**2,100**	**1,200**	**4,500**	<250	<250	**14,000**	<250	<2,500	<2.0	<2.0	<250	<250
MW-2	07/29/04	4,600	2,600	160	12	56	290	<80	<80	13,000	85	4,300	<2.0	<2.0	<80	<80
	10/20/04	2,100	1,200	220	20	57	86	<0.50	1.0	9,900	120	16,000	<2.0	<2.0	3.3	---
	02/09/05	**6,100**	**280**	**77**	**89**	**77**	**240**	<50	<50	**16,000**	**180**	**20,000**	<2.0	<2.0	<50	<50
MW-3	07/29/04	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	120	<0.50	240	<2.0	<2.0	<0.50	<0.50
	10/20/04	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	110	1.5	2,200	<2.0	<2.0	<0.50	---
	02/09/05	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	**160**	**0.54**	**310**	<2.0	<2.0	<0.50	<0.50
MW-4	07/29/04	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	7.0	<0.50	<5.0	<2.0	<2.0	<0.50	<0.50
	10/20/04	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	14	1.1	110	<2.0	<2.0	<0.50	---
	02/09/05	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	**19**	<0.50	<5.0	<2.0	<2.0	<0.50	<0.50

Notes:

TPH - Total Petroleum Hydrocarbons
MTBE - Methyl Tertiary Butyl Ether
DIPE - Di-isopropyl ether
ETBE - Ethyl Tertiary Butyl Ether
EDB -Ethylene dibromide
TAME - Tertiary Amyl Methyl Ether
TBA - Tertiary Butyl Alcohol

1,2-DCA -1,2-Dichloroethane
mg/L - milligrams per liter
ug/L - micrograms per liter
< - Below Laboratory Detection Limit
--- - not sampled

TABLE 3
GROUNDWATER ELVATION DATA
Rotten Robbies
55 Todd Road
Santa Rosa, California

Monitoring Well	Date	Reference Elevation (top of casing)	Depth to Groundwater	Groundwater Elevation
MW-1	10/20/04	104.67	11.89	92.78
	02/09/05		6.32	98.35
MW-2	10/20/04	104.15	10.99	93.16
	02/09/05		5.85	98.30
MW-3	10/20/04	104.87	12.95	91.92
	02/09/05		6.87	98.00
MW-4	10/20/04	105.94	10.86	95.08
	02/09/05		6.83	99.11

APPENDIX A

SCDHS LETTER DATED DECEMBER 30, 2005

Rpma-01.091
EJ

COPY

COUNTY of SONOMA
DEPARTMENT OF HEALTH SERVICES
Mark A Kostielney - Director
Sharon Aguilera - Assistant Director
Environmental Health Division
Jonathan J Krug - Director

December 30, 2004

RECEIVED
JAN 06 2005

David and Susan Zedrick
P.O. Box 7010
Santa Rosa, CA 95407

Subject: 55 Todd Road, Santa Rosa -Leaking Underground Storage Tank Site
SCDHS-EHD Site # 00025034, NCRWQCB Site # 1TSO861
Preliminary Site Assessment Results Report and Fourth Quarter 2004 Groundwater Monitoring Report (Apex Envirotech, Inc., November 9, 2004)

Dear David and Susan Zedrick:

On November 19, 2004, this Department received the referenced report from Apex Envirotech, Inc., dated November 9, 2004. The document has been reviewed by our staff, which includes a Licensed Civil Engineer and found generally acceptable.

Please note the following comments including exceptions:

1. This Department cannot concur with the five day Soil Vapor Extraction (SVE) until an initial Feasibility Study is submitted showing that SVE is appropriate for the site. The site should be fully characterized, however, prior to moving on to the remediation phase.

2. A Work Plan is required to complete site characterization detailing the additional soil and groundwater investigation. Soil definition is required in the areas of GP 1, 5 and monitoring well (MW-2). The groundwater plume needs to be defined down gradient and cross gradient of MW-2 and the proposed MW-5.

3. A Sensitive Receptor Survey (SRS) is required at this phase of the investigation.

   This Department's current standard for conducting sensitive receptor surveys requires that they include petroleum vapor receptors (basements, utility vaults, etc) within 250 feet of the release, ground water plume receptors (water supply wells, surface waters, wetlands) within 1000 feet, and municipal wells within 1/2 mile. An onsite survey is required for petroleum vapor receptors, surface water, and water supply wells. Sensitive receptor locations and the known extent of contamination must to be plotted on area and site maps. Available construction information, on file at the Department of Water Resources (DWR), particularly the depth of sanitary seals, should also be reported for water wells.

Mr. and Mrs. Zedrick
55 Todd Road
December 30, 2004

4. The on-site domestic well must be sampled for the constituents of concern. Any positive results of the sampling must be reported to this Department, the property owners and any water users immediately. A Geotracker update is required on any Domestic Wells sampled, including GPS locational data. The due date for taking samples is **February 1, 2005**. The submittal of a report of the sampling results is due on **March 1, 2005**.

5. Please clarify the use and details of the Underground Oil Interceptor shown on Figures 2-8.

The **due date** for the workplan to fully characterize this siteand the SRS are due **March 1, 2005**.

The State Cleanup Fund has discontinued its preapproval process because of a staffing shortage; however, reasonable and necessary costs should be eligible for reimbursement. The site must be in compliance with this Department's directives to be eligible for funding.

Please call me at (707) 565-6575 if you have any questions. This Department would be happy to meet and discuss the requirements of the site investigation.

Sincerely,

Gary Holtz
Registered Environmental Health Specialist
Leaking Underground Storage Tank, Local Oversight Program

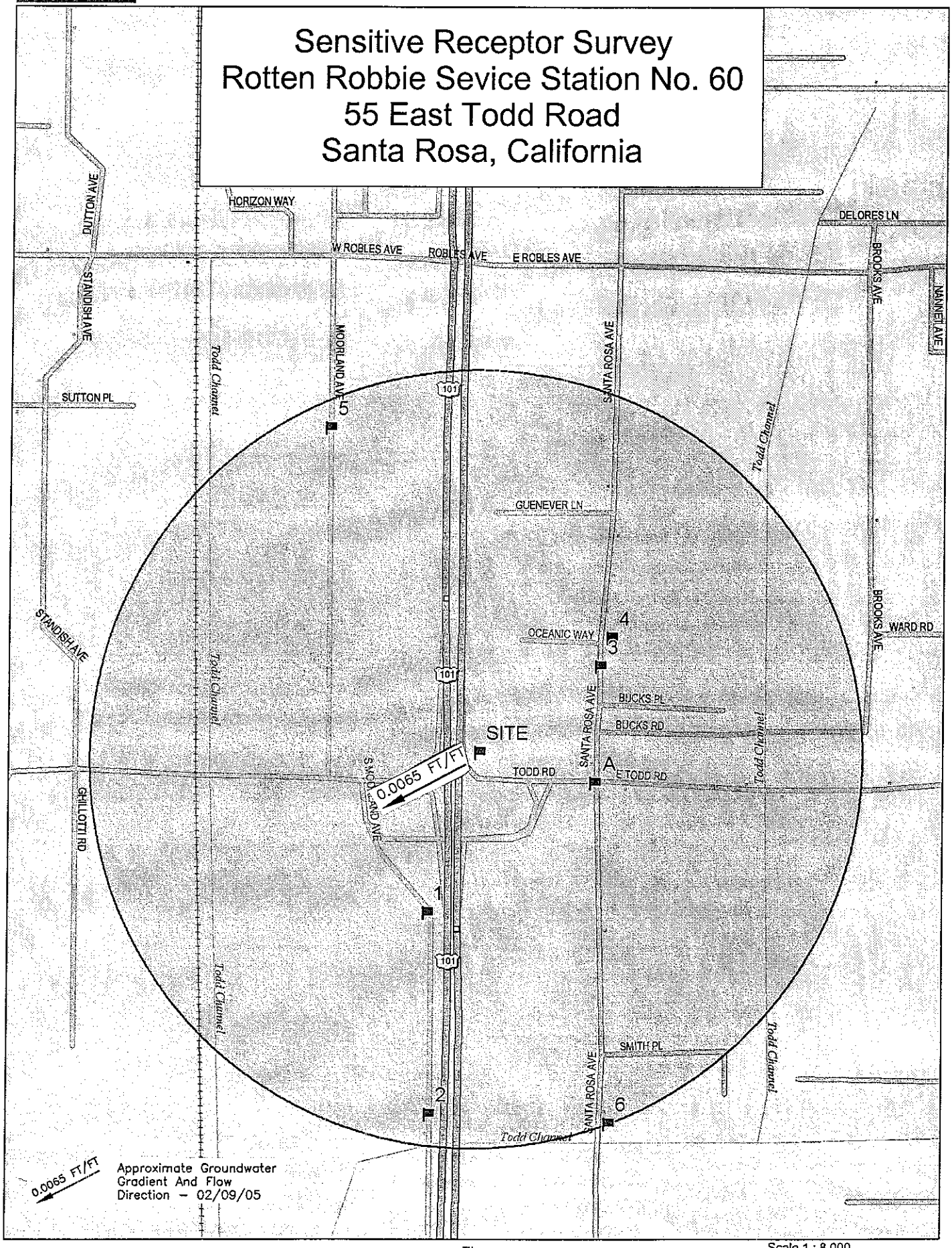
GH

c: Mr. John Jang, SFBRWQCB
Mr. David Charter, SWRCB Cleanup Fund
Mr. Michael Sgourakis, Apex Envirotech, Inc., 11244 Pyrites Way, Gold River, CA 95670

APPENDIX B

DWR SEARCH RESULTS

Sensitive Receptor Survey
Rotten Robbie Sevice Station No. 60
55 East Todd Road
Santa Rosa, California



www.delorme.com

TN
MN (0.0°E)

Scale 1 : 8,000

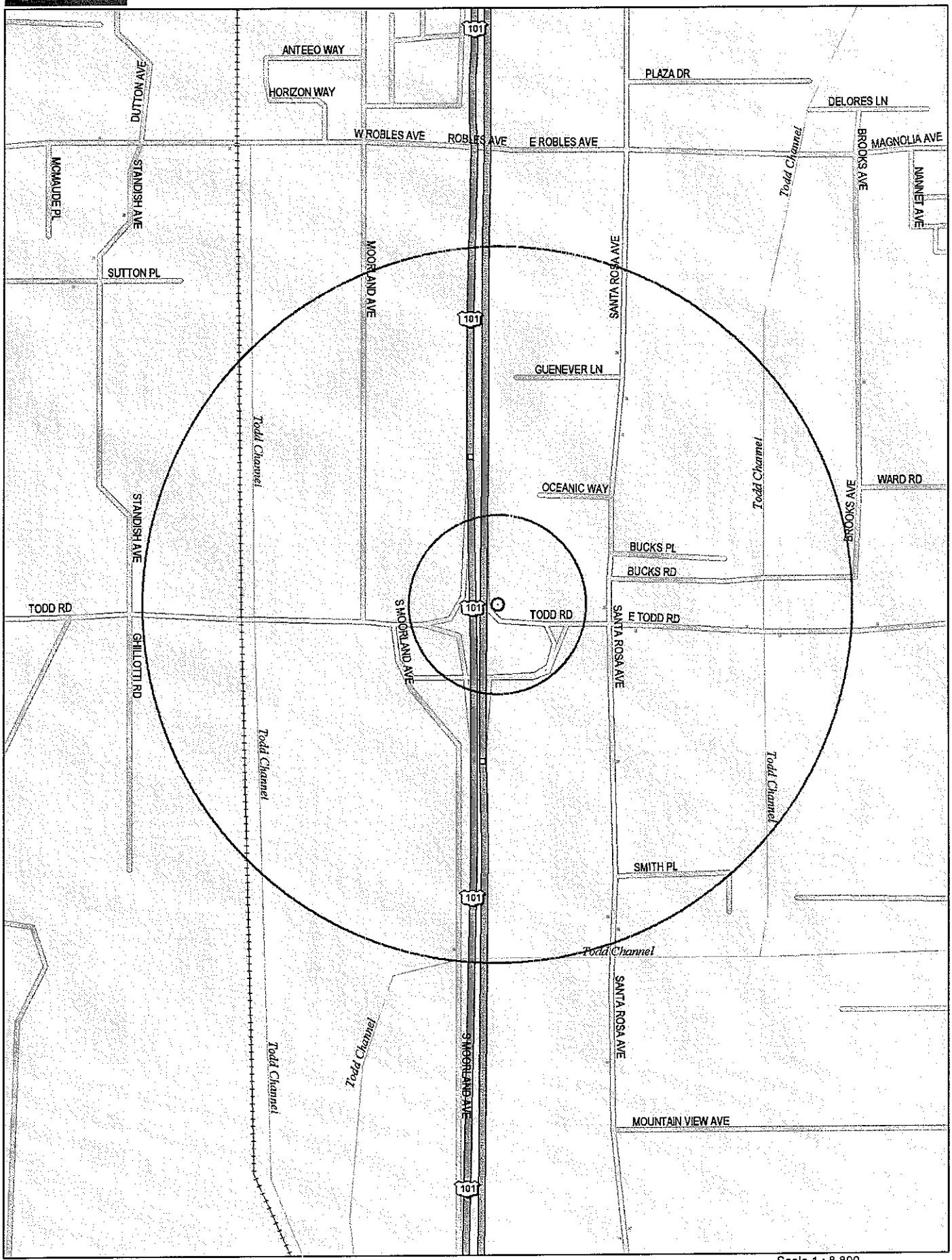
0 200 400 600 800 1000 ft
0 60 120 180 240 300 m

1" = 666.7 ft Data Zoom 14-6

TABLE 1
WELL SEARCH DATA
Rotten Robbie Service Station No. 60
55 East Todd Road
Santa Rosa, California

Well Plot No.	Well Owner	Time Installted	Section	Type	Total Depth (feet)	Screen Inteval (feet)	Casing (feet)	Initial Depth to GW (feet)	Static Depth to GW (feet)	Well Location
1	Hogue Equipment Co., Inc.	10/6/1976	6N8W11	domestic	148	90-110 / 130-148	0-148	41	---	3939 South Moorland Ave
2	Bartley Pump Inc.	6/12/1975	6N8W11	Industrial	110	70-90	0-110	10	20	4000 South Moorland Ave
3	Mountain Road	11/17/1980	6N8W2	Industrial	77	58-78	0-78	20	---	3675 Santa Rosa Ave
4	Norman Siler	8/22/1978	6N8W2	domestic	130	80-120	0-130	32	24	3534 Santa Rosa Ave
5	Eimer Hariak	2/28/1967	6N8W2	domestic	60	35-60	0-59	13	---	3560 Moorland Ave
6	Industrial Carting	6/28/1984	6N8W11	domestic	95	35-55 / 75-95	0-95	18	15	3911 Santa Rosa Ave
A	Tower Mart	---	---	---	---	---	---	---	---	3825 Santa Rosa Ave
B	Rotten Robbie	---	---	---	---	---	---	---	---	55 Todd Road

Note:
--- - Status unknown
GW - Groundwater



TN
MN (0.0°E)

Scale 1 : 8,800

1" = 733 3 ft

Data Zoom 14-5

APEX ENVIROTECH, INC. COST ESTIMATE

Date: 1/13/2005

Site: Rotten Robbie Service Station Number 60
55 East Todd Road
Santa Rosa, California

Project #: RMA01 001

TASK 12B: Preform Sensitive Receptor Survey and Domestic Well Sampling Event

Perform the following activities as requested by the County of Sonoma:

- Review Department of Water Resources files for wells within a half mile of the site
- Perform Door-to-Door survey for wells and basements within 1,000-feet of the site
- Perform onsite survey to confirm well and surface water locations
- Collect one groundwater sample from the onsite domestic well
- Submit water sample to a certified analytical laboratory for analysis of TPHg, TPHd, BTEX 7 oxygenates & lead scavengers
- Submit Results Report letter for analytical results of domestic well sample
- Submit Sensitive Receptor Survey Report to Sonoma County

Apex Professional Services

Category	Units	# of Units	Cost/Unit	Cost
Principal Professional	hr	2	$125.00	$250.00
Senior Professional	hr		$105.00	
Project Professional	hr	4	$90.00	$360.00
Staff Professional	hr	30	$75.00	$2,250.00
Technician	hr		$60.00	
Draftsperson	hr		$55.00	
Clerical	hr		$45.00	
Total Professional Services				**$2,860.00**

Apex Expenses

Category	Units	# of Units	Cost/Unit	Cost
Mileage	miles	300	$0.50	$150.00
Total Expenses				**$150.00**

Apex Outside Expenses

Category		Units	# of Units	Cost/Unit	Cost
Analytical Fees					
	Suite listed above	ea.	1	$304.00	$304.00
	EDF fee (10% of Total)	quote	1	$30.40	$30.40
	Total Expenses				**$334.40**

TOTAL TASK 12B: $3,344.40

State of California
Department of Water Resources
Central District
3251 S Street
Sacramento, CA 95816-7017

WELL DRILLER'S REPORTS
INSPECTION REQUEST AND AGREEMENT

Project: Rotten Robbie Service Station No. 60 - RMA01.001

Location: 55 East Todd Road, Santa Rosa

County: Sonoma Contract Number: _____

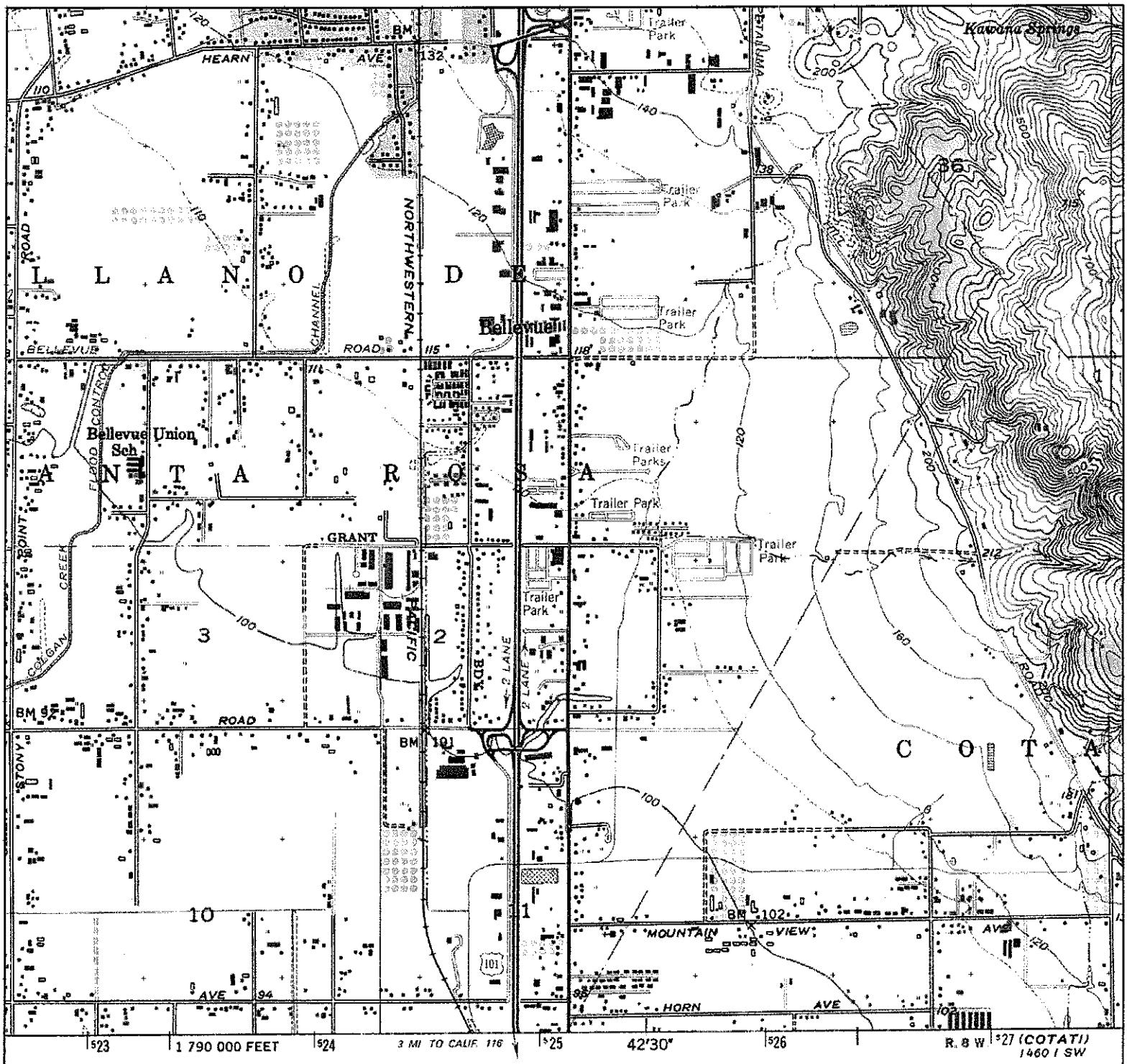
Request is made pursuant to Section 13751 of the California Water Code for permission to inspect or copy Water Well Driller's Reports which are on file in your office.

In accordance with the requirements of Section 13752 of the Water Code, it is stipulated and agreed that such reports, or any copy or copies made thereof, will not be made available for inspection by the public but will be used solely by this governmental agency for making studies. If copies are made or taken, each copy will be stamped "CONFIDENTIAL" or "FOR OFFICIAL USE ONLY" and will be kept in a restricted file, access to which is limited to the staff of this governmental agency or to its contracted agents. Any copies furnished to contracted agents must be returned to the Department of Water Resources, Central District upon completion of work by the contracted agent.

No information contained in these reports can be disseminated or published without the written permission of the owner of the well.

Apex Envirotech, Inc. Contracted Agent	Sonoma Co. Dept. Health Services Governmental Agency
11244 Pyrites Way Address	475 Aviation Blvd Suite 220 Address
Gold River, CA 95670 City, State, & Zip Code	Santa Rosa CA 95403 City, State, & Zip Code
By Kelli Felker Officer	By _____ Officer
Staff Environmental Scientist Title	Registered Environmental Health Specialist Title
(916) 851-0174 Telephone	(707) 565-6570 Telephone
2/14/05 Date	2/14/05 Date

(For Departmental Information: _____ copies sent _____)



ublished by the Geological Survey

SCALE 1:24000

&GS

otographs by Kelsh plotter methods
1954. Aerial photographs taken 1952

California coordinate system, zone 2
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1927 North American Datum
North American Datum 1983
5 meters north and
y dashed corner ticks

which only landmark buildings are shown

approximate locations

UTM GRID AND 1980 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

CONTOUR INTERVAL 20
DASHED LINES REPRESENT HALF INT
NATIONAL GEODETIC VERTICAL D

THIS MAP COMPLIES WITH NATIONAL MAP
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER COLOR
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SY

Revisions shown in purple and woodland compiled from
aerial photographs taken 1978 and other source data
This information not field checked Map edited 1980

(1)

ORIGINAL
File with DWR

CONFIDENTIAL LOG
Water Code Sec. 13752

3939 S Moorland

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do Not Fill In

No 155074

State Well No.

Other Well No. 6N/8W-11

GL 6N/8W-11F71

WM

(1) OWNER:

Name Hogue Equipment Co., Inc.

Address 1314 Scott St.
Petaluma, Calif. 94952

(2) LOCATION OF WELL:

County Sonoma Owner's number, if any

Township, Range, and Section SEE REVERSE

Distance from cities, roads, railroads, etc.

(3) TYPE OF WORK (check):

New Well [X] Deepening [ ] Reconditioning [ ] Destroying [ ]

If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(5) EQUIPMENT:

Rotary [ ]
Cable [X]
Other [ ]

(6) CASING INSTALLED:

STEEL: X OTHER:

SINGLE [X] DOUBLE [ ]

From ft.	To ft.	Diam.	Gage or Wall
0	148	8	188

If gravel packed

Diameter of Bore	From ft.	To ft.

Size of shoe or well ring:

Size of gravel:

Describe joint welded

(7) PERFORATIONS OR SCREEN:

Type of perforation or name of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
90	110	10	2	3/16
130	148	10	2	3/16

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes [X] No [ ] To what depth 50 ft.

Were any strata sealed against pollution? Yes [ ] No [ ] If yes, note depth of strata

From ft. to ft.

From ft. to ft.

Method of sealing

(9) WATER LEVELS:

Depth at which water was first found, if known 41 ft.

Standing level before perforating, if known ft.

Standing level after perforating and developing ft.

(10) WELL TESTS:

Was pump test made? Yes [ ] No [ ] If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

Temperature of water Was a chemical analysis made? Yes [ ] No [ ]

Was electric log made of well? Yes [ ] No [ ] If yes, attach copy

(11) WELL LOG:

Total depth 148 ft. Depth of completed well 148 ft.

Formation: *Describe by color, character, size of material, and structure*

ft. to	ft.	
0	3	fill
3	6	top soil
6	26	yellow clay
26	71	blue clay
71	124	brown sandy clay
124	148	brown clay with gravel

Work started 10/5/76, Completed 10/6/76

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief

NAME Keyt Well Drilling 243
(Person, firm, or corporation) (*Typed or printed*)

Address 4000 So. Moorland Ave.
Santa Rosa, Calif. 95401

[SIGNED] R. E. Bartley
(*Well Driller*)

License No. 200068 Dated 10/15/76, 19

SKETCH LOCATION OF WELL ON REVERSE SIDE

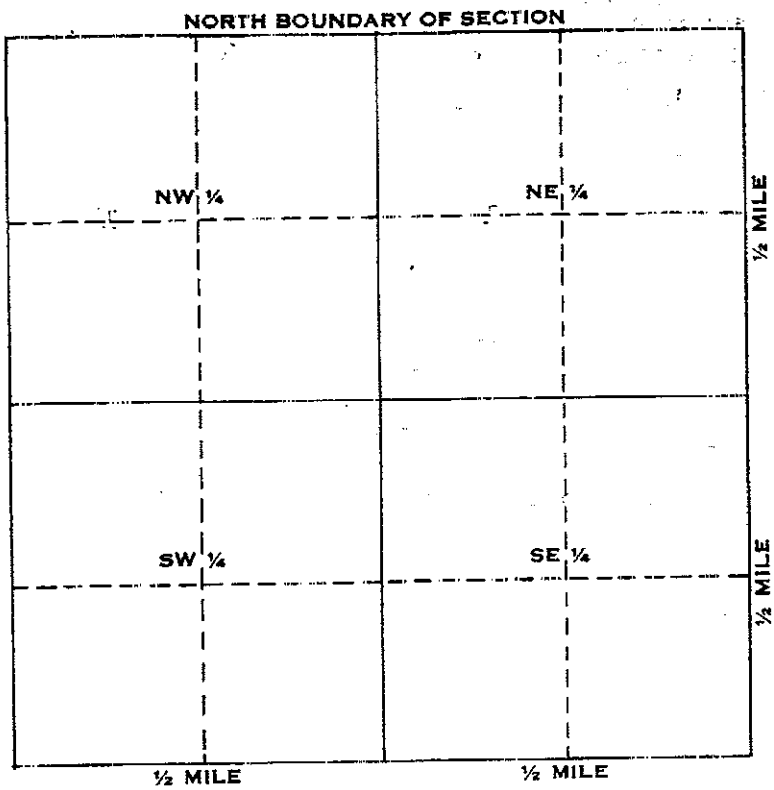
CONFIDENTIAL LOG
Water Code Sec. 13752

DWR 188 (REV 9-69)

8-72 30M TRIP OT OSP

WELL LOCATION SKETCH

155074



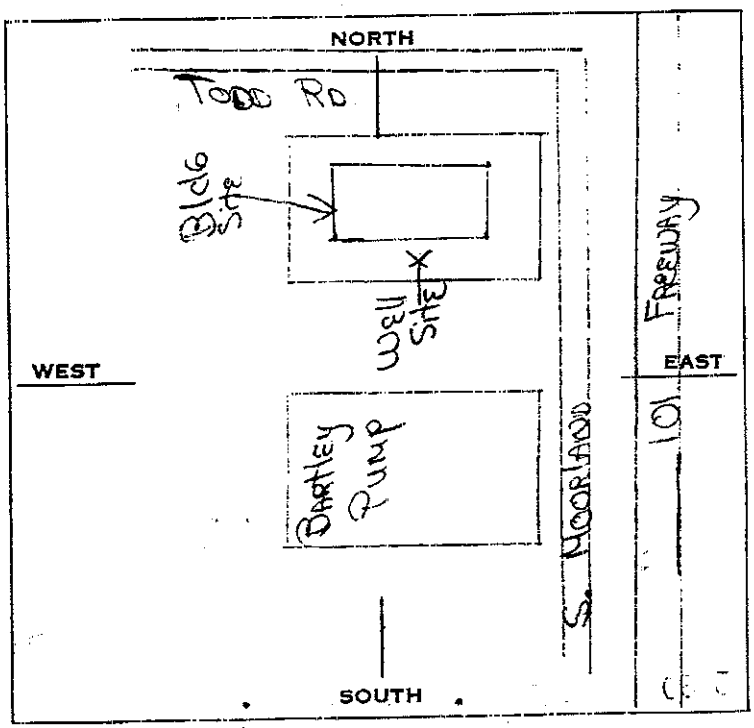
Township 6 N/S

Range 8 E/W

Section No. 11

A. Location of well in sectionized areas.
Sketch roads, railroads, streams, or other features as necessary.

3939 S. Moorland Ave. A.P # 134-183-2-3



B. Location of well in areas not sectionized.
Sketch roads, railroads, streams, or other features as necessary.
Indicate distances.

DEPT. OF WATER

(2)

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

ORIGINAL
File with DWR

CONFIDENTIAL LOG
Water Code Sec. 13752

WATER WELL DRILLERS REPORT

3939 S Moorland

Do Not Fill In

No 155074

State Well No.

Other Well No. 6N/8W-11

GL 6N/8W-11F71 WM

(1) OWNER:

Name Hogue Equipment Co., Inc.

Address 1314 Scott St.
Petaluma, Calif. 94952

(2) LOCATION OF WELL:

County Sonoma Owner's number, if any

Township, Range, and Section SEE REVERSE

Distance from cities, roads, railroads, etc.

(3) TYPE OF WORK (check):

New Well [X] Deepening [ ] Reconditioning [ ] Destroying [ ]

If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(5) EQUIPMENT:

Rotary [ ]
Cable [X]
Other [ ]

(6) CASING INSTALLED:

STEEL: X OTHER:
SINGLE [X] DOUBLE [ ]

From ft.	To ft.	Diam.	Gage or Wall
0	148	8	188

If gravel packed

Diameter of Bore	From ft.	To ft.

Size of shoe or well ring:

Size of gravel:

Describe joint welded

(7) PERFORATIONS OR SCREEN:

Type of perforation or name of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
90	110	10	2	3/16
130	148	10	2	3/16

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes [X] No [ ] To what depth 50 ft.

Were any strata sealed against pollution? Yes [ ] No [ ] If yes, note depth of strata

From ft. to ft.

From ft. to ft.

Method of sealing

(9) WATER LEVELS:

Depth at which water was first found, if known 41 ft.

Standing level before perforating, if known ft.

Standing level after perforating and developing ft.

(10) WELL TESTS:

Was pump test made? Yes [ ] No [ ] If yes, by whom?

gal./min. with ft. drawdown after hrs.

Temperature of water Was a chemical analysis made? Yes [ ] No [ ]

Was electric log made of well? Yes [ ] No [ ] If yes, attach copy

(11) WELL LOG:

Total depth 148 ft. Depth of completed well 148 ft.

Formation: *Describe by color, character, size of material and structure*

ft. to	ft.
0 to 3	fill
3 to 6	top soil
6 to 26	yellow clay
26 to 71	blue clay
71 to 124	brown sandy clay
124 to 148	brown clay with gravel

Work started 10/5/76 19, Completed 10/6/76 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief

NAME Keyt Well Drilling 243
(Person, firm, or corporation) *(Typed or printed)*

Address 4000 So. Moorland Ave.
Santa Rosa, Calif. 95401

[SIGNED] R. E. Bartley
(Well Driller)

License No 200068 Dated 10/15/76 19

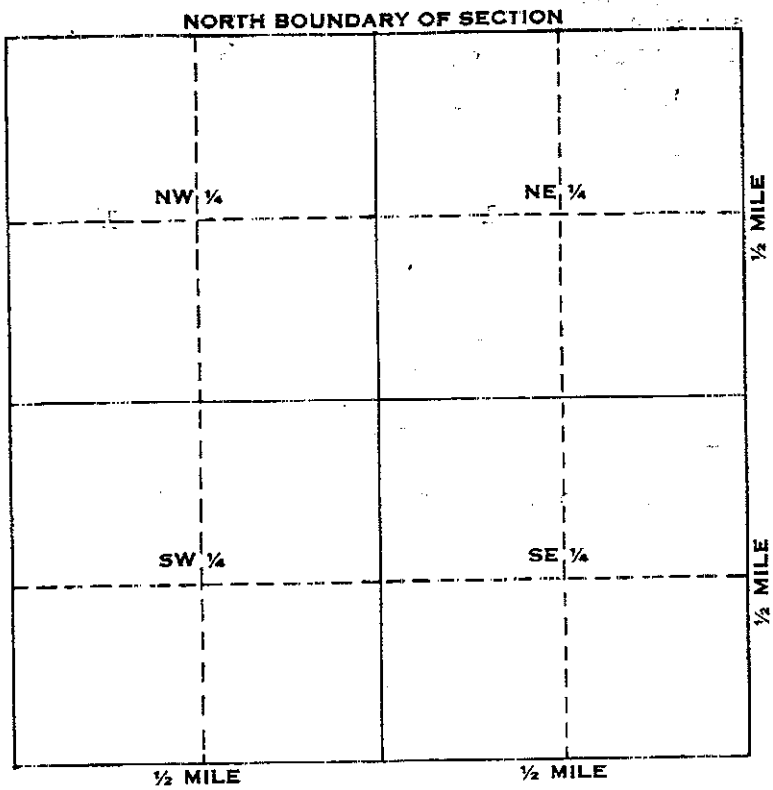
SKETCH LOCATION OF WELL ON REVERSE SIDE

CONFIDENTIAL LOG
Water Code Sec. 13752

DWR 188 (REV 9-68)

8-74 30M TRIP OT OSP

WELL LOCATION SKETCH



155074

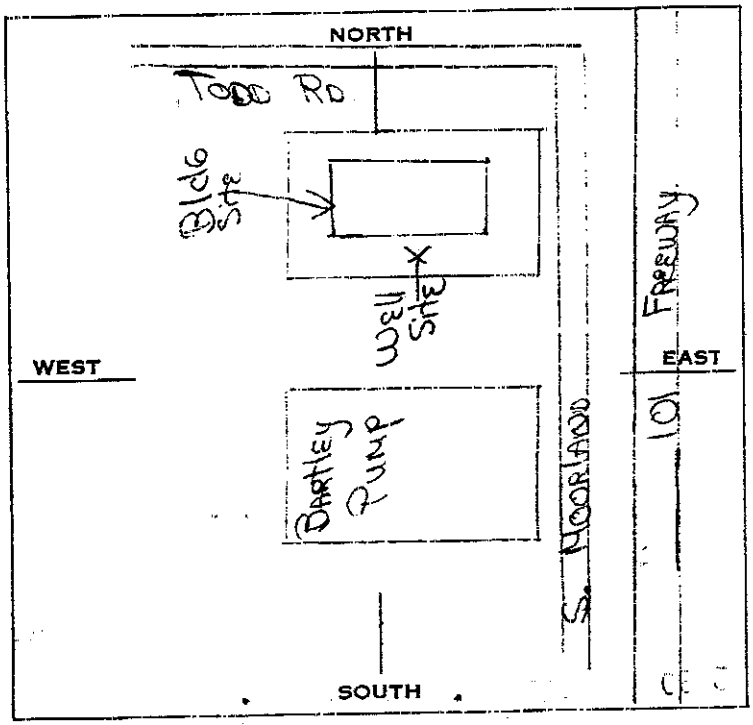
Township 6 N/S

Range 8 E/W

Section No. 11

A. Location of well in sectionized areas.
Sketch roads, railroads, streams, or other features as necessary.

3939 S. Moorland Ave. A.P # 134-183-2-3



B. Location of well in areas not sectionized.
Sketch roads, railroads, streams, or other features as necessary.
Indicate distances.

DEPT. OF WATER

6N/8W-11F1

3

CONFIDENTIAL LOG
Water Code Sec. 13752

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do Not Fill In

№ 122285

State Well No 6N/8W-11F1

Other Well No 6N/8W-11 B/F

(1) OWNER:

Name Bartley Pump Inc.

Address 4000 So. Moorland Ave.

Santa Rosa, Calif. 95401

(2) LOCATION OF WELL:

County Sonoma Owner's number, if any

Township, Range, and Section

Distance from cities, roads, railroads, etc.

(3) TYPE OF WORK *(check)*:

New Well ☒ Deepening ☐ Reconditioning ☐ Destroying ☐

If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE *(check)*:

Domestic ☐ Industrial ☒ Municipal ☐

Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:

Rotary ☐

Cable ☒

Other ☐

(6) CASING INSTALLED:

STEEL: OTHER: PVC

SINGLE ☒ DOUBLE ☐

From ft.	To ft.	Diam.	Gage or Wall
0	110	4 5/8	150

If gravel packed

Diameter of Bore	From ft.	To ft.
8	30	110
12	0	30

Size of shoe or well ring:

Size of gravel: 3/8

Describe joint solvent weld

(7) PERFORATIONS OR SCREEN:

Type of perforation or name of screen

From ft.	To ft.	Perf per row	Rows per ft.	Size in. x in.
0	70	no perfs		
70	90	4	1	1/8 x 6
90	110	no perfs		

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes ☒ No ☐ To what depth 25 ft.

Were any strata sealed against pollution? Yes ☐ No ☒ If yes, note depth of strata

From ft. to ft.

From ft. to ft.

Method of sealing cement

(9) WATER LEVELS:

Depth at which water was first found, if known 10 ft.

Standing level before perforating, if known ft.

Standing level after perforating and developing 20 ft.

(10) WELL TESTS:

Was pump test made? Yes ☐ No ☒ If yes, by whom?

Yield: 20 gal./min. with 0 ft. drawdown after 1 hrs.

Temperature of water Was a chemical analysis made? Yes ☐ No ☒

Was electric log made of well? Yes ☐ No ☒ If yes, attach copy

(11) WELL LOG:

Total depth 110 ft. Depth of completed well ft.

Formation: *Describe by color, character, size of material, and structure*

ft. to	ft.
0 to 20 overburden	
20 to 90 sharp course sand & gravel	
90 to 110 brown clay	

Work started 6/9/75 Completed 6/12/75

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Keyt Well Drilling
(Person, firm, or corporation) *(Typed or printed)*

Address 4000 So. Moorland Ave.
Santa Rosa, Calif. 95401

[SIGNED] Robert E. Bartley
(Well Driller)

License No 200068 Dated 6/12/75, 19

SKETCH LOCATION OF WELL ON REVERSE SIDE

CONFIDENTIAL LOG
Water Code Sec. 13752

DWR 188 (REV 9-69)

87139-750 6-72 30M TRIP (1)T OSP

06N08W-11F1

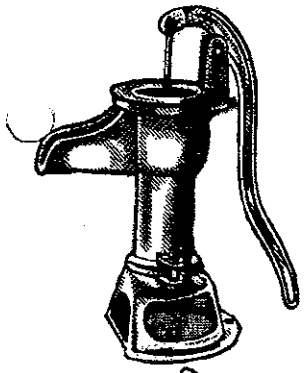
Bartley Pump Inc.

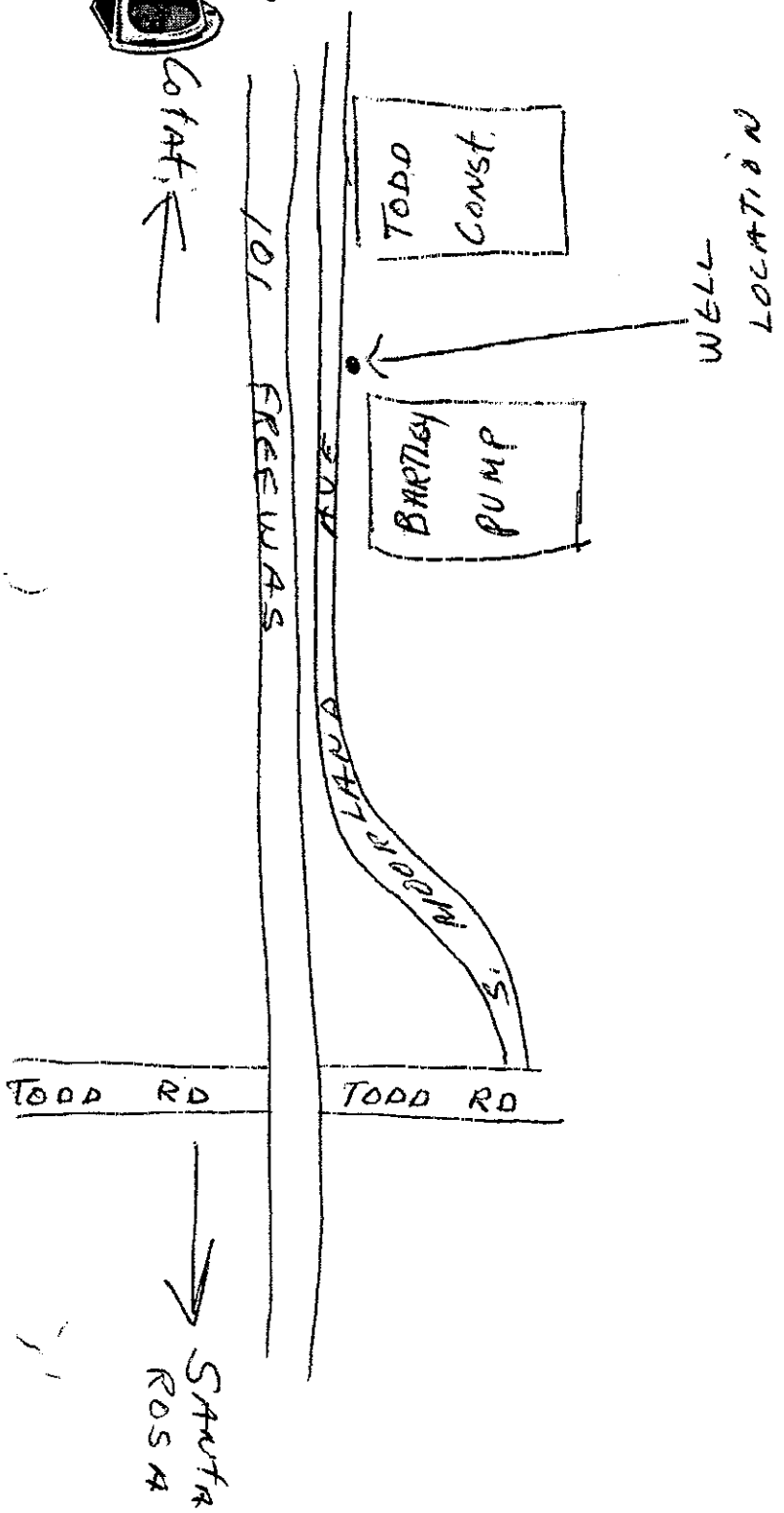
122285

4000 SOUTH MOORLAND AVENUE
SANTA ROSA, CALIF. 95401

TELEPHONE: (707)
542-2681 OR 542-2554

STATE CONTRACTORS
LICENSE # 200068





11-N8/N9

4

6N/8W-11F1

CONFIDENTIAL LOG
Water Code Sec. 13752

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do Not Fill In

No 122285

State Well No 6N/8W-11F1

Other Well No 6N/8W-11 B/C

(1) OWNER:

Name Bartley Pump Inc.

Address 4000 So. Moorland Ave.
Santa Rosa, Calif. 95401

(2) LOCATION OF WELL:

County Sonoma Owner's number, if any

Township, Range, and Section

Distance from cities, roads, railroads, etc.

(3) TYPE OF WORK (*check*):

New Well [X] Deepening [ ] Reconditioning [ ] Destroying [ ]

If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (*check*):

Domestic [ ] Industrial [X] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(5) EQUIPMENT:

Rotary [ ]
Cable [X]
Other [ ]

(6) CASING INSTALLED:

STEEL: OTHER: PVC

SINGLE [X] DOUBLE [ ]

From ft.	To ft.	Diam.	Gage or Wall
0	110	4 5/8	150

If gravel packed

Diameter of Bore	From ft.	To ft.
8	30	110
12	0	30

Size of shoe or well ring:

Size of gravel: 3/8

Describe joint solvent weld

(7) PERFORATIONS OR SCREEN:

Type of perforation or name of screen

From ft.	To ft.	Perf per row	Rows per ft.	Size in. x in.
0	70	no perfs		
70	90	4	1	1/8 x 6
90	110	no perfs		

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes [X] No [ ] To what depth 25 ft.

Were any strata sealed against pollution? Yes [ ] No [X] If yes, note depth of strata

From ft. to ft.

From ft. to ft.

Method of sealing cement

(9) WATER LEVELS:

Depth at which water was first found, if known ft. 10

Standing level before perforating, if known ft.

Standing level after perforating and developing ft. 20

(10) WELL TESTS:

Was pump test made? Yes [ ] No [X] If yes, by whom?

Yield: 20 gal./min. with 0 ft. drawdown after 1 hrs.

Temperature of water Was a chemical analysis made? Yes [ ] No [X]

Was electric log made of well? Yes [ ] No [X] If yes, attach copy

(11) WELL LOG:

Total depth 110 ft. Depth of completed well ft.

Formation: *Describe by color, character, size of material, and structure*

ft. to	ft.
0 to 20	overburden
20 to 90	sharp course sand & gravel
90 to 110	brown clay

Work started 6/9/75 Completed 6/12/75

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Keyt Well Drilling
(Person, firm, or corporation) (*Typed or printed*)

Address 4000 So. Moorland Ave.
Santa Rosa, Calif. 95401

[SIGNED] Robert E. Bartley
(*Well Driller*)

License No 200068 Dated 6/12/75, 19

SKETCH LOCATION OF WELL ON REVERSE SIDE

CONFIDENTIAL LOG
Water Code Sec. 13752

DWR 188 (REV. 9-69)

67139-750 8-72 30M TRIP OT OSP

06N08W-11F1

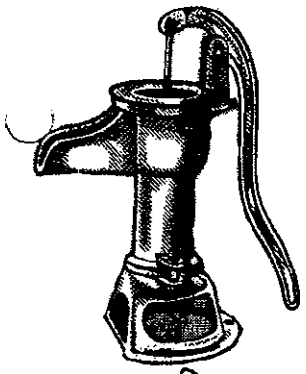
Bartley Pump Inc.

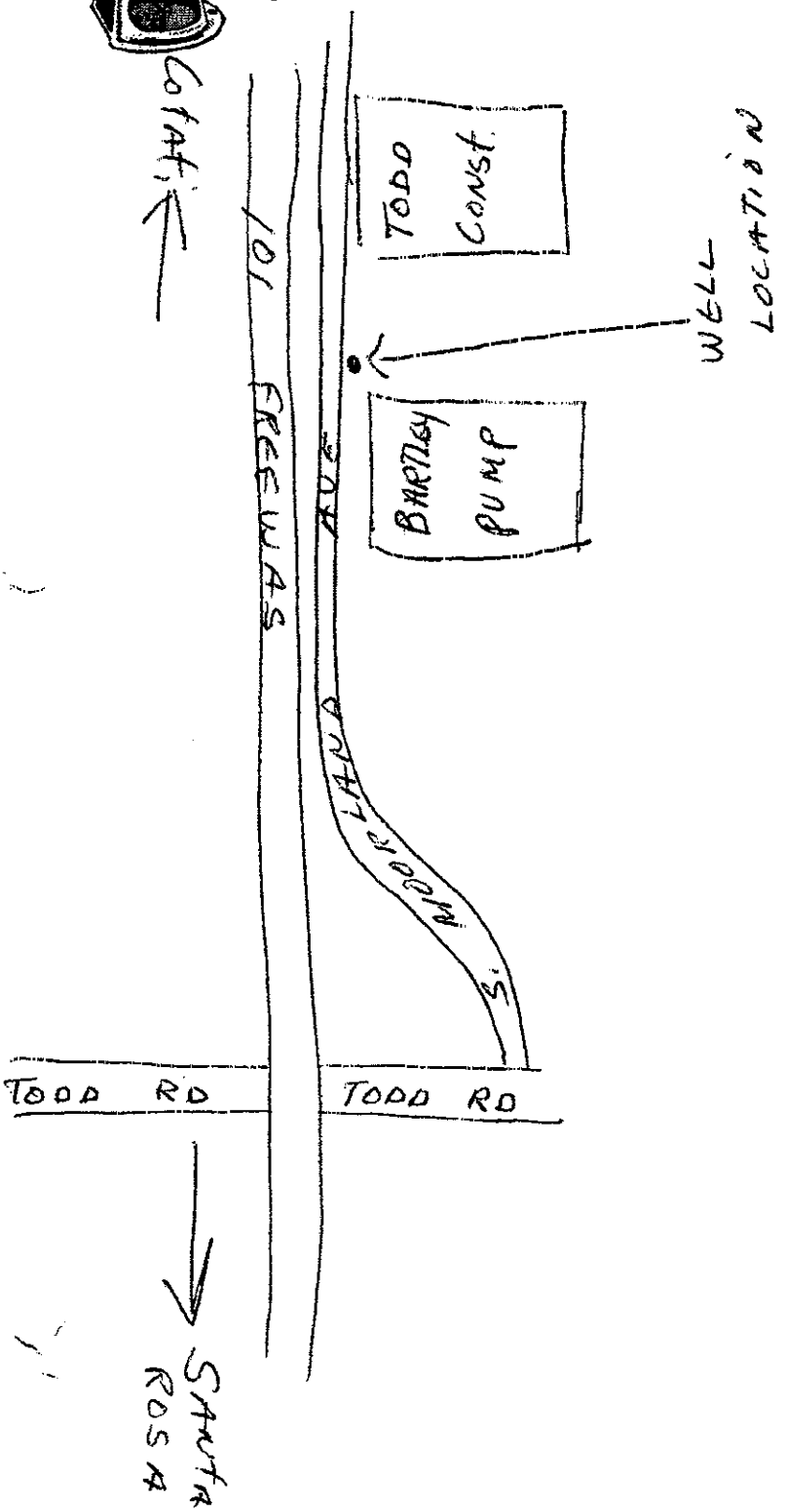
122285

4000 SOUTH MOORLAND AVENUE
SANTA ROSA, CALIF. 95401

TELEPHONE: (707)
542-2681 OR 542-2554

STATE CONTRACTORS
LICENSE # 200068





11-M8/N9

ORIGINAL

File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

(15)

Do not fill in

No. 094813

e of Intent No.

Permit No. or Date #623-80 A.P.#134-123-05

State Well No.

Other Well No. 06N08W02-P

(1) **OWNER:** Name Mountain Road
Address 3675 Santa Rosa Ave.
City Santa Rosa, Ca. 95401 Zip

(2) **LOCATION OF WELL** (See instructions):
County Sonoma Owner's Well Number
Well address if different from above same
Township Range Section
Distance from cities, roads, railroads, fences, etc.

(3) **TYPE OF WORK:**
New Well XX Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) **PROPOSED USE:**
Domestic ☐
Irrigation ☐
Industrial XX
Test Well ☐
Stock ☐
Municipal ☐
Other ☐

WELL LOCATION SKETCH

(5) **EQUIPMENT:**
Rotary ☐ Reverse ☐
Cable XX Air ☐
Other ☐ Bucket ☐

(6) **GRAVEL PACK:**
Yes ☐ No XX Size
Diameter of bore
Packed from ft. to ft.

(7) **CASING INSTALLED:**
Steel XX Plastic ☐ Concrete ☐

From ft.	To ft.	Dia in.	Gage or Wall
0	78	6"	.152

(8) **PERFORATIONS:**
Type of perforation or size of screen

From ft.	To ft.	Slot size
58	78	

(9) **WELL SEAL:**
Was surface sanitary seal provided? Yes XX No ☐ If yes, to depth 25 ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval ft
Method of sealing readymix

(10) **WATER LEVELS:**
Depth of first water, if known ft
Standing level after well completion 20 ft.

(11) **WELL TESTS:**
Was well test made? Yes XX No ☐ If yes, by whom?
Type of test Pump ☐ Bailer XX Air lift ☐
Depth to water at start of test ft At end of test 50 ft
Discharge 40 gal/min after 4 hours Water temperature
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?
Was electric log made? Yes ☐ No ☐ If yes, attach copy to this report

(12) **WELL LOG:** Total depth 77 ft Depth of completed well ft

from ft.	to	ft.	Formation (Describe by color, character, size or material)
1	-	15	yellow clay
16	-	18	blue sand
18	-	30	blue clay
30	-	65	yellow sandy clay
65	-	75	yellow sand/gravel
76	-	77	yellow clay

Work started 11/3 19 80 Completed 11/17/80

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED Kenneth Hansen
(Well Driller)

NAME LES PETERSEN DRILLING & PUMP, INC
(Person, firm, or corporation) (Typed or printed)

Address 5434 Old Redwood Highway
City Santa Rosa, Ca. Zip 95401
License No. 261084 Date of this report 11/20/80

DWR 188 (REV 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL

File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

(10)

Do not fill in

No. 03468

Notice of Intent No ____

Local Permit No or Date ____

State Well No ____

Other Well No 6N/8W-2

OWNER: Name Norman Siler
Address 3534 Santa Rosa, Ave.
City Santa Rosa, Calif. 95401

(2) **LOCATION OF WELL** (See instructions):
County Sonoma Owner's Well Number ____
Well address if different from above ____
Township ____ Range ____ Section ____
Distance from cities, roads, railroads, fences, etc ____

3534 Santa Rosa Ave.

WELL LOCATION SKETCH

(3) **TYPE OF WORK:**
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) **PROPOSED USE:**
Domestic ☒
Irrigation ☐
Industrial ☐
Test Well ☐
Stock ☐
Municipal ☐
Other ☐

(5) **EQUIPMENT:**
Rotary ☐ Reverse ☐
Cable ☒ Air ☐
Other ☐ Bucket ☐

(6) **GRAVEL PACK:**
Yes ☐ No ☒ Size ____
Diameter of bore ____
Packed from ____ to ____ ft.

(7) **CASING INSTALLED:**
Steel ☒ Plastic ☐ Concrete ☐

(8) **PERFORATIONS:**
Type of perforation or size of screen ____

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size
0	130	8	188	80	126	1/4

(9) **WELL SEAL:**
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 35 ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval ____ ft
Method of sealing ____

(10) **WATER LEVELS:**
Depth of first water if known 32 ft
Standing level after well completion 24 ft.

(11) **WELL TESTS:**
Was well test made? Yes ☒ No ☐ If yes by whom? ____
Type of test Pump ☐ Bailer ☒ Air lift ☐
Depth to water at start of test 24 ft At end of test 54 ft
Discharge 50 gal/min after 1 hours Water temperature ____
Chemical analysis made? Yes ☐ No ☐ If yes by whom? ____
Was electric log made? Yes ☐ No ☐ If yes attach copy to this report

(12) **WELL LOG:** Total depth 130 ft Depth of completed well 130 ft.

from ft. to ft. Formation (Describe by color, character, size or material)

0 to 2 top soil
2 to 4 yellow hard pan
4 to 28 stickey yellow clay
28 to 43 sticky blue caly
43 to 70 brown clay
70 to 82 clay and gravel
82 to 95 yellow clay
95 to 124 yellow clay & gravel
124 to 130 sticky yellow clay

Work started 8/18/78 19__ Completed 8/22/78 19__

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief

SIGNED R. E. Bartley (Well Driller)

NAME Bartley Pump Inc./DBA Keyt Well Drilling
(Person, firm, or corporation) (Typed or printed)
Address 4000 So. Moorland Ave.
City Santa Rosa, Calif. 95401 Zip ____
License No. 200068 Date of this report 8/22/78

ORIGINAL
File Original, Duplicate and Triplicate with the
REGIONAL WATER POLLUTION
CONTROL BOARD No.
(Insert appropriate number)

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code) 5726

THE RESOURCES AGENCY OF CALIFORNIA

(7)

Do Not Fill In
Nº 107830
State Well No.
Other Well No. 6/8-2

(1) OWNER:
Name ELMER HARJAK
Address 3560 Moorland Avenue
Santa Rosa, California

(2) LOCATION OF WELL:
County Sonoma Owner's number, if any—
R. F. D. or Street No.
3560 Moorland Avenue
Santa Rosa, California

(3) TYPE OF WORK (check):
New well XX Deepening ☐ Reconditioning ☐ Abandon ☐
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic XX Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:
Rotary XX
Cable ☐
Dug Well ☐

(6) CASING INSTALLED:
SINGLE XX DOUBLE ☐

From	ft. to	ft.	Diam.	Gage or Wall	Diameter of Bore	from ft.	to ft.
0	59	6	5/8	10	20	0	59

Type and size of shoe or well ring Bullnose
Size of gravel: Pea
Describe joint Welded

(7) PERFORATIONS:
Type of perforator used Torch
Size of perforations 6 in., length, by 3/16 in.
From 35 ft. to 60 ft. 4 Perf. per row 1 Rows per ft.

(8) CONSTRUCTION:
Was a surface sanitary seal provided? XX Yes ☐ No To what depth 25 ft.
Were any strata sealed against pollution? ☐ Yes ☐ No If yes, note depth of strata
From ft. to ft.
Method of Sealing Concrete on Top Pack

(9) WATER LEVELS:
Depth at which water was first found ft.
Standing level before perforating ft.
Standing level after perforating 13 ft.

(10) WELL TESTS:
Was a pump test made? ☐ Yes XX No If yes, by whom? Bail
Yield: 30 gal./min. with 4 ft. draw down after hrs.
Temperature of water Cool Was a chemical analysis made? ☐ Yes XX No
Was electric log made of well? ☐ Yes XX No

(11) WELL LOG:
Total depth 59 ft. Depth of completed well 59 ft.
Formation: *Describe by color, character, size of material, and structure.*

ft.	to ft.	Formation
0	1	Top Soil
1	8	Brown Sandy Clay
8	15	Brown Sand & Gravel
15	20	Brown Clay
20	29	Gray Clay
29	36	Sand & Gravel
36	44	Brown & Grat Sandy Clay
44	47	Brown Sand
47	49	Blue Sand
49	53	Blue Sandy Clay
53	57	Brown Clay
57	58	Blue Sand
58	59	Blue Clay

CONFIDENTIAL LOG
Water Code Sec. 7080

FOR OFFICIAL USE ONLY

Work started 2/28 1967. Completed 2/28 1967

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
NAME WEEKS DRILLING & PUMP COMPANY
(Person, firm, or corporation) (Typed or printed)
Address 6100 Sebastopol Road
Sebastopol, California
[Signed] Mary E. Thompson
GERALD THOMPSON By: MARY E. THOMPSON, President
License No. 177681 Dated 3/6/ 1967

87649 5-63 25M QUIN SPO DWR 188 (REV. 3-54)

8)

ORIGINAL

File with DWR

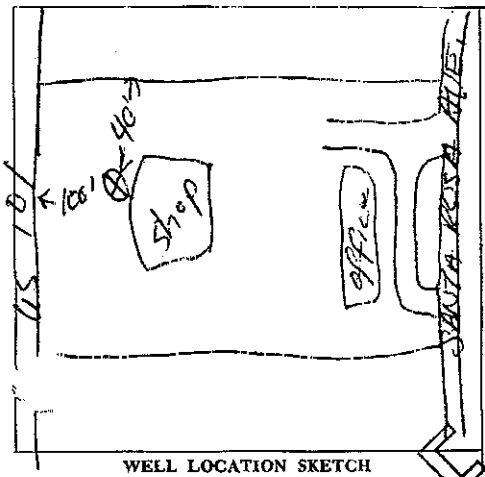
STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in
No. 148100

of Intent No.
Permit No. or Date.
State Well No
Other Well No 06N08W11C

(1) OWNER: Name Industrial Carting
Address 3911 Santa Rosa, Avenue
City Santa Rosa Zip

(2) LOCATION OF WELL (See instructions):
County Sonoma Owner's Well Number
Well address if different from above
Township Range Section
Distance from cities, roads, railroads, fences, etc
6' from building, 100' East of Hwy 101,
40' from North prop line



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☒
Irrigation ☐
Industrial ☐
Test Well ☐
Stock ☐
Municipal ☐
Other ☐

(5) EQUIPMENT:
Rotary ☒ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☒ No ☐ Size 3/8" pea
Diameter of bore 9 7/8"
Packed from 22 ft. to 95 ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☒ Concrete ☐

From ft.	To ft.	Dia in.	Gage or Wall
0	95	6"	c1200

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size
35	55	3/32"
75	95	

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 22 ft
Were strata sealed against pollution? Yes ☐ No ☒ Interval ft.
Method of sealing concrete pour

(10) WATER LEVELS:
Depth of first water, if known 18 ft.
Standing level after well completion 15 ft.

(11) WELL TESTS:
Was well test made? Yes ☒ No ☐ If yes, by whom driller
Type of test Pump ☐ Bailer ☐ Air lift ☒
Depth to water at start of test 15 ft. At end of test 90 ft.
Yield 40 gal/min after 1 hours Water temperature cool
Chemical analysis made? Yes ☐ No ☒ If yes, by whom?
Was electric log made? Yes ☐ No ☒ If yes, attach copy to this report

(12) WELL LOG: Total depth 95 ft. Depth of completed well 95 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	18	brown sandy clay
18	20	brown gravel
20	45	brown clay
45	47	brown clay and gravel
47	65	brown clay
65	79	blue clay
79	90	blue sand and gravel
90	95	blue clay

Work started 6/27/84 Completed 6/28/84 19

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief
SIGNED Gary F Jensen RG (Well Driller)
NAME Nutting & Jensen Drilling (Person, firm, or corporation) (Typed or printed)
Address 1924 Gravenstein Hwy. South
City Sebastopol, CA Zip 95472
License No. 340854 Date of this report 7/10/84

DWR 188 (REV 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

9

ORIGINAL

File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in
No. 061760

of Intent No. _____
Date of Permit No. or Date _____

State Well No. _____
Other Well No. 06N08W02L01M

(1) OWNER: Name Trailer Corral
Address 3455 Santa Rosa Avenue
City Santa Rosa, California Zip

(2) LOCATION OF WELL (See instructions):
County Sonoma Owner's Well Number
Well address if different from above same
Township Range Section
Distance from cities, roads, railroads, fences, etc.

(3) TYPE OF WORK:
New Well XX Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☐
Stock ☐
Municipal ☐
Other XX

WELL LOCATION SKETCH

(5) EQUIPMENT:
Rotary XX Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes XX No ☐ Size Birdseye
Diameter of bore
Packed from 0 to 53 ft.

(7) CASING INSTALLED:
Steel XX Plastic ☐ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
0	901	8	10

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size
Sandscreen		
274	279	608 618
299	399	759 769
532	547	830 880

(9) WELL SEAL:
Was surface sanitary seal provided? Yes XX No ☐ If yes, to depth 53 ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval ft.
Method of sealing readymix

(10) WATER LEVELS:
Depth of first water, if known ft.
Standing level after well completion 45 ft.

(11) WELL TESTS:
Was well test made? Yes XX No ☐ If yes, by whom? later.
Type of test Pump ☐ Bailer XX Air lift ☐
Depth to water at start of test ft. At end of test 125 ft.
Pump range 45 gal/min after 125 hours Water temperature
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?
Was electric log made? Yes ☐ No ☐ If yes, attach copy to this report

Pump test to be run

(12) WELL LOG: Total depth 900 ft. Depth of completed well ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	4	top soil
4	20	sandy yellow clay
20	23	gravel
23	50	blue clay
50	65	brown clay
65	78	brown sand/gravel
78	85	brown clay
85	92	gravel
92	352	sandy brn. clay (streaks gravel 205-225)
352	525	blue clay
525	532	gravel (tight)
532	608	blue clay
608	615	blue sand and gravel
615	762	blue clay
762	770	small blue gravel
770	780	blue clay
780	784	gravel (loose)
784	810	blue clay
810	830	blue clay/loose gravel
830	880	fine blue gravel
880	900	blue clay/gravel

Work started 9/12/78 19 Completed 9/26/78 19

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
SIGNED JOHN JEPSEN (Well Driller)
NAME LES PETERSEN DRILLING & PUMP, INC. (Person, firm, or corporation) (Typed or printed)
Address 5434 Old Redwood Highway
City Santa Rosa, Ca. Zip 95401
License No. 261084 Date of this report 9/28/78

DWR 188 (REV 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

10

ORIGINAL

File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 066869

e of Intent No. 176146

al Permit No or Date 577-85

State Well No

Other Well No 06N08W02

(1) OWNER: Name Patricia Sheehan

Address 3462 Moorland Ave.

City Santa Rosa, CA Zip

(2) LOCATION OF WELL (See instructions):

County Sonoma Owner's Well Number 3462

Well address if different from above same

Township Range Section

Distance from cities, roads, railroads, fences, etc

WELL LOCATION SKETCH

(3) TYPE OF WORK:

New Well ☒ Deepening ☐

Reconstruction ☐

Reconditioning ☐

Horizontal Well ☐

Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:

Domestic XX

Irrigation ☐

Industrial ☐

Test Well ☐

Stock ☐

Municipal ☐

Other ☐

(5) EQUIPMENT:

Rotary ☒ Reverse ☐

Cable ☐ Air ☐

Other ☐ Bucket ☐

(6) GRAVEL PACK:

Yes ☒ No ☐ Size Pea

Diameter of bore 10"

Packed from 20 to 121 ft.

(7) CASING INSTALLED:

Steel ☐ Plastic XX Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
0	121	6"	1/4"

(8) PERFORATIONS: XXXXXX

Type of perforation or size of screen

From ft.	To ft.	Slot size
61	71	1/8 x 6"
91	121	
SKILL SAW		

(9) WELL SEAL:

Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 20 ft

Were strata sealed against pollution? Yes ☐ No XX Interval ft

Method of sealing Grout

(10) WATER LEVELS:

Depth of first water, if known ft

Standing level after well completion ft.

(11) WELL TESTS:

Was well test made? Yes ☒ No ☐ If yes, by whom? Driller

Type of test Pump ☐ Bailer ☒ Air lift ☐

Depth to water at start of test 22 ft. At end of test 62 ft

Yield 7 gal/min after 3 hours Water temperature Cold

Chemical analysis made? Yes ☐ No ☒ If yes, by whom?

Was electric log made? Yes ☐ No ☒ If yes, attach copy to this report

(12) WELL LOG: Total depth 121 ft Depth of completed well 121 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	2	Topsoil
2	6	Hard light brown clay
6	16	Brown clay
16	19	Brown sand and gravel
19	36	Brown clay
36	77	Brown clay w/strks of blue clay
77	80	Brown clay w/gravel
80	96	Brown clay
96	98	Gravel and Brown clay
98	117	Brown clay
117	120	Brown sandy clay w/gravel
120	121	Brown clay

Work started 10-25 19 85 Completed 10-27 19 85

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief

SIGNED Frank King (Well Driller)

NAME Tri-K-Drilling (Person, firm, or corporation) (Typed or printed)

Address P.O. Box 3938

City Santa Rosa, CA Zip 95402

License No. 245571 Date of this report 10-31-85

DWR 188 (REV 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Slightly outside 2000 ft

(11)

ORIGINAL

File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 066870

of Intent No. 176145

al Permit No or Date 591-85

State Well No

Other Well No 06N08W02M

(1) OWNER: Name Charles Shrabel

Address 3449 Moorland Ave.

City Santa Rosa, CA Zip

(2) LOCATION OF WELL (See instructions):

County Sonoma Owner's Well Number

Well address if different from above same as above

Township Range Section

Distance from cities, roads, railroads, fences, etc.

(3) TYPE OF WORK:

New Well XX Deepening ☐

Reconstruction ☐

Reconditioning ☐

Horizontal Well ☐

Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:

Domestic XX

Irrigation ☐

Industrial ☐

Test Well ☐

Stock ☐

Municipal ☐

Other ☐

WELL LOCATION SKETCH

(5) EQUIPMENT:

Rotary XX Reverse ☐

Cable ☐ Air ☐

Other ☐ Bucket ☐

(6) GRAVEL PACK:

Yes ☒ No ☑ Size Pea

Diameter of bore 10"

Packed from 20 to 118 ft.

(7) CASING INSTALLED:

Steel ☐ Plastic XX Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
0	118	4"	1/4"

(8) PERFORATIONS: Skill Saw

Type of perforation or size of screen

From ft.	To ft.	Slot size
68	118	1/8 x 6"

(9) WELL SEAL:

Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 20 ft

Were strata sealed against pollution? Yes ☐ No ☒ Interval ft.

Method of sealing Grout

(10) WATER LEVELS:

Depth of first water if known ft.

Standing level after well completion ft.

(11) WELL TESTS:

Was well test made? Yes XX No ☐ If yes, by whom? Driller

Type of test Pump ☐ Bailer ☒ Air lift ☐

Depth to water at start of test 19 ft At end of test 65 ft

ge 15 gal/min after 4 hours Water temperature Cold

al analysis made? Yes ☐ No ☒ If yes, by whom?

Was electric log made? Yes ☐ No ☒ If yes, attach copy to this report

(12) WELL LOG: Total depth 118 ft. Depth of completed well 118 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	3	Brown clay
3	6	Cemented gravel
6	43	Hard brown clay
43	46	Brown sand & gravel
46	75	Brown clay
75	79	Blue & sandy gravel
79	101	Brown clay
101	118	Brown sandy clay w/gravel

Work started 10-31 19 85 Completed 11-2 19 85

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED Frank Kurr (Well Driller)

NAME Tri-K-Drilling (Person, firm, or corporation) (Typed or printed)

Address P.O. Box 3938

City Santa Rosa, CA Zip 95402

License No. 245571 Date of this report Nov. 8, 1985

DWR 188 (REV 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

APPENDIX C

APEX STANDARD OPERATING PROCEDURES

APEX ENVIROTECH, INC.

STANDARD OPERATING PROCEDURE

Monitoring Wells

SOP - 1
SOIL BORING SAMPLING

During drilling, soil samples for chemical analysis are collected in thin-walled brass tubes, of varying diameters and lengths (e g , 4 or 6 inches long by 2 inches outside diameter). Three or four of the selected tubes, plus a spacer tube, are set in an 18-inch long split-barrel sampler of the appropriate inside-diameter.

Where possible, the split-barrel sampler is driven its entire length either hydraulically or using a 140-pound drop hammer. The sampler is extracted from the borehole and the brass tubes, containing the soil samples, are removed. Upon removal from the sampler, the selected brass tubes are either immediately trimmed and capped with aluminum foil or "Teflon" sheets and plastic caps or the samples are extruded from the tubes and sealed within other appropriate, cleaned sample containers. The samples are then hermetically sealed, labeled, and refrigerated for delivery, under strict chain-of-custody, to the analytical laboratory. These procedures minimize the potential for cross-contamination and volatilization of volatile organic compounds (VOC) prior to chemical analysis.

One soil sample collected at each sampling interval is analyzed in the field using either a portable photoionization detector (PID), flame ionization detector, organic vapor analyzer, catalytic gas detector, or an explosimeter. The purpose of this field analysis is to qualitatively determine the presence or absence of hydrocarbons, and the samples to be analyzed at the laboratory. The soil sample is sealed in either a brass tube, glass jar, or plastic bag to allow for some volatilization of VOC. The PID is then used to measure the concentrations of hydrocarbons within the containers's headspace. The data is recorded on both field notes and the boring logs at the depth corresponding to the sampling point.

Other soil samples are collected to document the soil and/or stratigraphic profile beneath the project site and estimate the relative permeability of the subsurface materials. All drilling and sampling equipment are either steam cleaned or washed in solution and doubly rinsed in deionized water prior to use at each site and between boreholes to minimize the potential for cross-contamination.

In the event the soil samples cannot be submitted to the analytical laboratory on the same day they are collected (e.g., due to weekends or holidays), the samples are temporarily stored until the first opportunity for submittal either on ice in a cooler, such as when in the field, or in a refrigerator at Apex's office.

SOP - 3
SOIL CLASSIFICATION

Soil samples are classified according to the Unified Soil Classification System. Representative portions of the samples may be submitted, under strict chain-of-custody, to an analytical laboratory for further examination and verification of the in-field classification and analysis of soil mechanical and/or petrophysical properties. The soil types are indicated on logs of either excavations or borings together with depths corresponding to the sampling points and other pertinent information.

SOP - 4
SAMPLE IDENTIFICATION AND CHAIN-OF-CUSTODY PROCEDURES

Sample identification and chain-of-custody procedures ensure sample integrity as well as document sample possession from the time of collection to ultimate disposal. Each sample container submitted for analysis is labeled to identify the job number, date, time of sample collection, a sample number unique to the sample, any in-field measurements made, sampling methodology, name(s) of on-site personnel, and any other pertinent field observations also recorded on the field excavation or boring log.

Chain-of-custody forms are used to record possession of the sample from time of collection to arrival at the laboratory. During shipment, the person with custody of the samples will relinquish them to the next person by signing the chain-of-custody form(s) and noting the date and time. The sample-control officer at the laboratory will verify sample integrity, correct preservation, confirm collection in the proper container(s), and ensure adequate volume for analysis.

If these conditions are met, the samples will be assigned unique laboratory log numbers for identification throughout analysis and reporting. The log numbers will be recorded on the chain-of-custody forms and in the legally-required log book maintained in the laboratory. The sample description, date received, client's name and any other relevant information will also be recorded.

SOP - 5
LABORATORY ANALYTICAL QUALITY ASSURANCE AND CONTROL

In addition to routine instrument calibration, replicates, spikes, blanks, spiked blanks, and certified reference materials are routinely analyzed at method-specific frequencies to monitor precision and bias. Additional components of the laboratory Quality Assurance/Quality Control program include:

1. Participation in state and federal laboratory accreditation/certification programs;
2. Participation in both U.S. EPA Performance Evaluation studies (WS and WP studies) and inter-laboratory performance evaluation programs;
3. Standard operating procedures describing routine and periodic instrument maintenance;
4. "Out-of-Control"/Corrective Action documentation procedures; and,
5. Multi-level review of raw data and client reports.

SOP - 6
HOLLOW-STEM AUGER MONITORING WELL INSTALLATION AND DEVELOPMENT

Boreholes for monitoring wells are drilled using a truck-mounted, hollow-stem auger drill rig. The borehole diameter will be a minimum of 4 inches larger than the outside diameter of the casing when installing well screen. The hollow-stem auger provides minimal interruption of drilling while permitting

soil sampling at desired intervals. Soil samples are collected by either hammering (with a 140-pound drop hammer) or hydraulically pushing a conventional split-barrel sampler containing pre-cleaned 2-inch-diameter brass tubes. A geologist or engineer from Apex Envirotech, Inc , continuously logs each borehole during drilling and constantly checks drill cuttings for indications of both the first recognizable occurrence of groundwater and volatile hydrocarbons using either a portable photoionization detector, flame ionization detector, or an explosimeter. The sampler is rinsed between samples and either steam cleaned or washed with all other drilling equipment between borings to minimize the potential for cross-contamination.

Monitoring wells are cased with threaded, factory-perforated and blank Schedule 40 PVC. The perforated interval consists of slotted casing, generally with 0.020-inch wide by 1.5-inch long slots, with 42 slots per foot. A PVC cap may be secured to the bottom of the casing with stainless steel screws; no solvents or cements are used. Centering devices may be fastened to the casing to ensure even distribution of filter material and grout within the borehole annulus. The well casing is thoroughly washed and/or steam cleaned, or may be purchased as pre-cleaned, prior to installation.

After setting the casing inside the hollow-stem auger, sand or gravel filter material is poured into the annular space to fill from boring bottom to generally 1 foot above the perforated interval. A 1- to 2-foot thick bentonite plug is set above this filter material to prevent grout from infiltrating the filter pack. Either neat cement, containing about 5 percent bentonite, or sand-cement grout is then tremmied into the annular space from the top of the bentonite plug to near surface. A traffic-rated vault is installed around each wellhead for wells located in parking lots or driveways, while steel "stovepipes" are usually set over wellheads in landscaped areas.

After installation, the wells are thoroughly developed to remove residual drilling materials from the wellbore, and to improve well performance by removing fine material from the filter pack that may pass into the well. Well development techniques used may include pumping, surging, bailing, swabbing, jetting, flushing, and air-lifting. All development water is collected either in drums or tanks for temporary storage, and properly disposed of depending on laboratory analytical results. To minimize the potential for cross-contamination between wells, all development equipment is either steam cleaned or properly washed prior to use. Following development, the well is allowed to stand undisturbed for a minimum of 24 hours before its first sampling.

SOP - 7
GROUNDWATER PURGING AND SAMPLING

Prior to water sampling, each well is purged by evacuating a minimum of three wetted well-casing volumes of groundwater. When required, purging will continue until either the discharge water temperature, conductivity, or pH stabilize, a maximum of ten wetted-casing volumes of groundwater have been recovered, or the well is bailed dry. When practical, the groundwater sample should be collected when the water level in the well recovers to at least 80 percent of its static level.

The sampling equipment consists of either a "Teflon" bailer, PVC bailer, or stainless steel bladder pump with a "Teflon" bladder. If the sampling system is dedicated to the well, then the bailer is usually "Teflon," but the bladder pump is PVC with a polypropylene bladder. In general and depending on the intended laboratory analysis, 40-milliliter glass, volatile organic analysis (VOA) vials, with 'Teflon' septa, are used as sample containers

The groundwater sample is decanted into each VOA vial in such a manner that there is no meniscus at the top of the vial. A cap is quickly secured to the top of the vial. The vial is then inverted and gently tapped to see if air bubbles are present. If none are present, the vial is labeled and refrigerated for delivery under strict chain-of-custody, to the analytical laboratory. Label information should include a unique sample identification number, job identification number, date, time, type of analysis requested, and the sampler's name

For quality control purposes, a duplicate water sample is collected from each well. This sample may also be analyzed or put on hold at the laboratory. When required, a trip blank, prepared at the laboratory, is placed in the transport cooler. It is labeled similar to the well samples, remains in the cooler during transport, and is analyzed by the laboratory along with the groundwater samples. In addition, a field blank may be prepared in the field when sampling equipment is not dedicated. The field blank is prepared after a pump or bailer has been either steam cleaned or properly washed, prior to use in the next well, and is analyzed along with the other samples. The field blank analysis demonstrates the effectiveness of the in-field cleaning procedures to prevent cross-contamination.

To minimize the potential for cross-contamination between wells, all well development and water sampling equipment not dedicated to a well is either steam cleaned or properly washed between use. As a secondary precautionary measure, wells are sampled in order of least to highest concentrations as established by available previous analytical data.

In the event the water samples cannot be submitted to the analytical laboratory on the same day they are collected (e.g., due to weekends or holidays), the samples are temporarily stored until the first opportunity for submittal either on water ice in a cooler, such as when in the field, or in refrigerator at Apex's office.

SOP - 12
MEASURING LIQUID LEVELS USING WATER LEVEL METER OR INTERFACE PROBE

Field equipment used for liquid-level gauging typically includes the measuring instrument (water-level meter or interface probe) and product bailer(s). The field kit also includes cleaning supplies (buckets, solution, spray bottles, and deionized water) to be used in cleaning the equipment between wells.

Prior to measurement, the instrument tip is lowered into the well until it touches bottom. Using the previously established top-of-casing or top-of-box (i.e., wellhead vault) point, the probe cord (or halyard) is marked and a measuring tape (graduated in hundredths of a foot) is used to determine the distance between the probe end and the marking on the cord. This measurement is then recorded on the liquid-level data sheet as the "Measured Total Depth" of the well.

When necessary in using the interface probe to measure liquid levels, the probe is first electrically grounded to either the metal stove pipe or another metal object nearby. When no ground is available, reproducible measurements can be obtained by clipping the ground lead to the handle of the interface probe case.

The probe tip is then lowered into the well and submerged in the groundwater. An oscillating (beeping) tone indicates the probe is in water. The probe is slowly raised until either the oscillating tone ceases or becomes a steady tone. In either case, this is the depth-to-water (DTW) indication and the DTW measurement is made accordingly. The steady tone indicates floating liquid hydrocarbons (FLH). In this case, the probe is slowly raised until the steady tone ceases. This is the depth-to-product (DTP) indication and the DTP measurement is made accordingly.

The process of lowering and raising the probe must be repeated several times to ensure accurate measurements. The DTW and DTP measurements are recorded on the liquid-level data sheet. When FLH are indicated by the probe's response, a product bailer is lowered partially through the FLH-water interface to confirm the FLH on the water surface and as further indication of the FLH thickness, particularly in cases where the FLH layer is quite thin. This measurement is recorded on the data sheet as "FLH thickness."

In order to avoid cross-contamination of wells during the liquid-level measurement process, wells are measured in the order of "clean" to "dirty" (where such information is available). In addition, all measurement equipment is cleaned with solution and thoroughly rinsed with deionized water before use, between measurements in respective wells, and at the completion of the day's use.

APPENDIX D

LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY FORM

CALIFORNIA LABORATORY SERVICES CHAIN OF CUSTODY

CLS ID. NO. 080347 (of)

Report To:

Name and Address

Apex Envirotech, Inc.

11244 Pyrites Wy., Gold River, CA 95670

Project Manager
Rebekah Westrup

Project Name
Rotten Robbie Service Station #60

Sampled By R Morgan

Job Description
Domestic well sample

Site Location
55 Todd Road, Santa Rosa

Client Job Number
RMA01.001-DW

Destination Laboratory

CLS (916) 638-7301
3249 Fitzgerald Road
Rancho Cordova, CA
95742
www.californialab.com

☐ OTHER

GEOTRACKER

EDF REPORT (YES) ☐ NO

GLOBAL ID. T0609778353

FIELD CONDITIONS:

COMPOSITE:

DATE	TIME	SAMPLE IDENTIFICATION	FIELD ID.	CONTAINER MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	TPHg 8015	TPHd 8015	BTEX 8020	7 oxygenates 8260	12DCA 8260	EDB 8260	TURNAROUND TIME IN DAYS 1	2	5	10	SPECIAL INSTRUCTIONS
2/9/05	1020	DW-1	MW-1	water	4	Voa/A	1	X	X	X	X	X	X			X		DL for oxyg.= 0.50 ug/L.
																		INVOICE TO:
																		PO#
																		QUOTE#

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

PRESERVATIVES (1) HCL (2) HNO_3 (3) = COLD (4)

RELINQUISHED BY (Signature)	PRINT NAME/COMPANY	DATE/TIME	RECEIVED BY (Signature)	PRINT NAME/COMPANY
R Morgan	Bob Morgan/Apex	2/9/05 1900		
		2/10/05 1055		

RECEIVED AT LAB BY: DATE/TIME: 2-10-05/1533 CONDITIONS/COMMENTS:

SHIPPED BY: ☐ FED EX ☐ UPS ☐ OTHER AIR BILL #

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

February 16, 2005

CLS Work Order #: COB0347
COC #: None

Rebekah Westrup
APEX Envirotech Inc. - Gold River
11244 Pyrites Way
Gold River, CA 95670

Project Name: Rotten Robbie Service Station #60

Enclosed are the results of analyses for samples received by the laboratory on 02/10/05 15:55. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

02/16/05 16:10

APEX Envirotech Inc - Gold River 11244 Pyrites Way Gold River, CA 95670	Project: Rotten Robbie Service Station #60 Project Number: RMA01 001-DW Project Manager: Rebekah Westrup	**CLS Work Order #: COB0347** COC #: None

Extractable Petroleum Hydrocarbons by EPA Method 8015M

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DW-1 (COB0347-01) Water	**Sampled: 02/09/05 10:20**	**Received: 02/10/05 15:55**							
Diesel	ND	0 050	mg/L	1	CO01112	02/11/05	02/14/05	EPA 8015M	

CALIFORNIA LABORATORY SERVICES

02/16/05 16:10

APEX Envirotech Inc - Gold River	Project: Rotten Robbie Service Station #60	**CLS Work Order #: COB0347**
11244 Pyrites Way	Project Number: RMA01 001-DW	COC #: None
Gold River, CA 95670	Project Manager: Rebekah Westrup	

Gas/BTEX by GC PID/FID

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DW-1 (COB0347-01) Water Sampled: 02/09/05 10:20 Received: 02/10/05 15:55									
Gasoline	ND	50	µg/L	1	CO01158	02/14/05	02/14/05	8015M/8021B	
Benzene	ND	0 50	"	"	"	"	"	"	
Toluene	ND	0 50	"	"	"	"	"	"	
Ethylbenzene	ND	0 50	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	
Surrogate: o-Chlorotoluene (Gas)		*87 5 %*		*65-135*	"	"	"	"	

CALIFORNIA LABORATORY SERVICES

02/16/05 16:10

APEX Envirotech Inc. - Gold River	Project: Rotten Robbie Service Station #60	**CLS Work Order #: COB0347**
11244 Pyrites Way	Project Number: RMA01.001-DW	COC #: None
Gold River, CA 95670	Project Manager: Rebekah Westrup	

Non-halogenated Organic Compounds by EPA 8015

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DW-1 (COB0347-01) Water Sampled: 02/09/05 10:20 Received: 02/10/05 15:55									
Ethanol	ND	20	mg/L	1	CO01044	02/10/05	02/10/05	EPA 8015B	
Methanol	ND	20	"	"	"	"	"	"	

CALIFORNIA LABORATORY SERVICES

02/16/05 16:10

APEX Envirotech Inc - Gold River	Project: Rotten Robbie Service Station #60	**CLS Work Order #: COB0347**
11244 Pyrites Way	Project Number: RMA01.001-DW	COC #: None
Gold River, CA 95670	Project Manager: Rebekah Westrup	

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DW-1 (COB0347-01) Water Sampled: 02/09/05 10:20 Received: 02/10/05 15:55									
Di-isopropyl ether	ND	0.50	µg/L	1	CO01091	02/11/05	02/11/05	EPA 8260B	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	0.50	"	"	"	"	"	"	
Tert-butyl alcohol	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Surrogate: Toluene-d8		*95.9 %*		*72-125*	"	"	"	"	

CALIFORNIA LABORATORY SERVICES

02/16/05 16:10

APEX Envirotech Inc - Gold River	Project: Rotten Robbie Service Station #60	**CLS Work Order #: COB0347**
11244 Pyrites Way	Project Number: RMA01.001-DW	COC #: None
Gold River, CA 95670	Project Manager: Rebekah Westrup	

Extractable Petroleum Hydrocarbons by EPA Method 8015M - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CO01112 - EPA 3510B GCNV										
Blank (CO01112-BLK1)				Prepared: 02/11/05 Analyzed: 02/14/05						
Diesel	ND	0 050	mg/L							
Motor Oil	ND	0 050	"							
LCS (CO01112-BS1)				Prepared: 02/11/05 Analyzed: 02/14/05						
Diesel	2 41	0 050	mg/L	2 50		96 4	65-135			
LCS Dup (CO01112-BSD1)				Prepared: 02/11/05 Analyzed: 02/14/05						
Diesel	2 40	0 050	mg/L	2 50		96 0	65-135	0 416	30	
Matrix Spike (CO01112-MS1)		**Source: COB0358-01**		Prepared: 02/11/05 Analyzed: 02/14/05						
Diesel	2 25	0 050	mg/L	2 50	0 040	88 4	46-137			
Matrix Spike Dup (CO01112-MSD1)		**Source: COB0358-01**		Prepared: 02/11/05 Analyzed: 02/14/05						
Diesel	2 28	0 050	mg/L	2 50	0 040	89 6	46-137	1 32	30	

CALIFORNIA LABORATORY SERVICES

02/16/05 16:10

APEX Envirotech Inc. - Gold River	Project: Rotten Robbie Service Station #60	**CLS Work Order #: COB0347**
11244 Pyrites Way	Project Number: RMA01 001-DW	COC #: None
Gold River, CA 95670	Project Manager: Rebekah Westrup	

Gas/BTEX by GC PID/FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CO01158 - EPA 5030 Water GC										
Blank (CO01158-BLK1)				Prepared & Analyzed: 02/14/05						
Gasoline	ND	50	µg/L							
Benzene	ND	0 50	"							
Toluene	ND	0 50	"							
Ethylbenzene	ND	0 50	"							
Xylenes (total)	ND	1 0	"							
Surrogate: o-Chlorotoluene (BTEX)	*19 2*		"	*20 0*		*96 0*	*65-135*			
Surrogate: o-Chlorotoluene (Gas)	*16 6*		"	*20 0*		*83 0*	*65-135*			
LCS (CO01158-BS1)				Prepared & Analyzed: 02/14/05						
Benzene	15 4	0 50	µg/L	20 0		77 0	70-140			
Toluene	19 1	0.50	"	20 0		95 5	70-140			
Ethylbenzene	20 3	0 50	"	20 0		102	70-140			
Xylenes (total)	60 1	1 0	"	60 0		100	70-140			
Surrogate: o-Chlorotoluene (BTEX)	*18 8*		"	*20 0*		*94 0*	*65-135*			
LCS Dup (CO01158-BSD1)				Prepared & Analyzed: 02/14/05						
Benzene	16 3	0 50	µg/L	20 0		81 5	70-140	5 68	30	
Toluene	20 3	0 50	"	20 0		102	70-140	6 09	30	
Ethylbenzene	21 6	0 50	"	20 0		108	70-140	6 21	30	
Xylenes (total)	64 2	1 0	"	60 0		107	70-140	6 60	30	
Surrogate: o-Chlorotoluene (BTEX)	*20 0*		"	*20 0*		*100*	*65-135*			
Matrix Spike (CO01158-MS1)	**Source: COB0422-07**			Prepared & Analyzed: 02/14/05						
Benzene	16 8	0 50	µg/L	20 0	ND	84 0	60-140			
Toluene	20 7	0 50	"	20 0	ND	104	60-140			
Ethylbenzene	21 3	0 50	"	20 0	ND	106	60-140			
Xylenes (total)	63 8	1 0	"	60 0	ND	106	60-140			
Surrogate: o-Chlorotoluene (BTEX)	*19 7*		"	*20 0*		*98 5*	*65-135*			

CALIFORNIA LABORATORY SERVICES

02/16/05 16:10

APEX Envirotech Inc - Gold River	Project: Rotten Robbie Service Station #60	**CLS Work Order #: COB0347**
11244 Pyrites Way	Project Number: RMA01 001-DW	COC #: None
Gold River, CA 95670	Project Manager: Rebekah Westrup	

Gas/BTEX by GC PID/FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CO01158 - EPA 5030 Water GC										
Matrix Spike Dup (CO01158-MSD1)		**Source: COB0422-07**		Prepared & Analyzed: 02/14/05						
Benzene	16 7	0 50	µg/L	20 0	ND	83 5	60-140	0 597	30	
Toluene	20 5	0 50	"	20 0	ND	102	60-140	0 971	30	
Ethylbenzene	21 0	0 50	"	20 0	ND	105	60-140	1 42	30	
Xylenes (total)	62 5	1 0	"	60 0	ND	104	60-140	2 06	30	
Surrogate o-Chlorotoluene (BTEX)	*19 9*		"	*20 0*		*99 5*	*65-135*			

CALIFORNIA LABORATORY SERVICES

02/16/05 16:10

APEX Envirotech Inc - Gold River	Project: Rotten Robbie Service Station #60	**CLS Work Order #: COB0347**
11244 Pyrites Way	Project Number: RMA01 001-DW	COC #: None
Gold River, CA 95670	Project Manager: Rebekah Westrup	

Non-halogenated Organic Compounds by EPA 8015 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CO01044 - Direct Inj. GCNV										
Blank (CO01044-BLK1)				Prepared & Analyzed: 02/10/05						
Ethanol	ND	2 0	mg/L							
Methanol	ND	2 0	"							
LCS (CO01044-BS1)				Prepared & Analyzed: 02/10/05						
Methanol	40 6	2 0	mg/L	50 0		81 2	75-125			
LCS Dup (CO01044-BSD1)				Prepared & Analyzed: 02/10/05						
Methanol	43 8	2 0	mg/L	50 0		87 6	75-125	7 58	30	
Matrix Spike (CO01044-MS1)		**Source: COB0300-01**		Prepared & Analyzed: 02/10/05						
Methanol	44 7	2 0	mg/L	50 0	ND	89 4	75-125			
Matrix Spike Dup (CO01044-MSD1)		**Source: COB0300-01**		Prepared & Analyzed: 02/10/05						
Methanol	42 5	2 0	mg/L	50 0	ND	85 0	75-125	5 05	30	

CALIFORNIA LABORATORY SERVICES

02/16/05 16:10

APEX Envirotech Inc. - Gold River	Project: Rotten Robbie Service Station #60	**CLS Work Order #: COB0347**
11244 Pyrites Way	Project Number: RMA01 001-DW	COC #: None
Gold River, CA 95670	Project Manager: Rebekah Westrup	

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CO01091 - EPA 5030 Water MS										
Blank (CO01091-BLK1)				Prepared & Analyzed: 02/11/05						
Di-isopropyl ether	ND	0 50	µg/L							
Ethyl tert-butyl ether	ND	0 50	"							
Methyl tert-butyl ether	ND	0 50	"							
tert-Amyl methyl ether	ND	0 50	"							
Tert-butyl alcohol	ND	5 0	"							
Surrogate: Toluene-d8	*9 44*		"	*10 0*		*94 4*	*72-125*			
LCS (CO01091-BS1)				Prepared & Analyzed: 02/11/05						
Methyl tert-butyl ether	15 2	0 50	µg/L	20 0		76 0	52-130			
Surrogate: Toluene-d8	*10 0*		"	*10 0*		*100*	*72-125*			
LCS Dup (CO01091-BSD1)				Prepared & Analyzed: 02/11/05						
Methyl tert-butyl ether	15 6	0 50	µg/L	20 0		78 0	52-130	2 60	30	
Surrogate: Toluene-d8	*10 1*		"	*10 0*		*101*	*72-125*			

CALIFORNIA LABORATORY SERVICES

02/16/05 16:10

APEX Envirotech Inc - Gold River	Project: Rotten Robbie Service Station #60	**CLS Work Order #: COB0347**
11244 Pyrites Way	Project Number: RMA01 001-DW	COC #: None
Gold River, CA 95670	Project Manager: Rebekah Westrup	

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

APPENDIX E

MONITORING WELL BORING LOGS

MONITORING WELL LOG MW-1

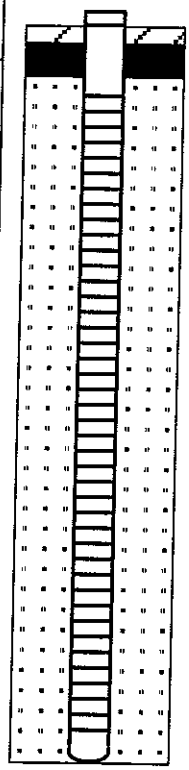
SHEET 1 of 1

PROJECT No: RMA01.001
SITE: 55 Todd Road
CLIENT: R. M. Associates

DATE: July 9, 2004
LOGGED BY: Rebekah A. Westrup
CONTRACTOR: Cascade Drilling Inc.

EASTING: 6356567.03
NORTHING: 1903695.65
ELEVATION: 104.67

WATER LEVEL	SAMPLE	PID (ppmv)	LEGEND	DESCRIPTION	WELL
				Ground Surface	
				ASPHALT	
				CLAY, Dusky Yellowish Green, High Plasticity, Soft, Damp, Strong Odor	
First Water				Clayey Very Fine to Fine Grain GRAVEL with Fine to Medium Grain Sand, Dusky Yellowish Green, Slight Plasticity Moderate Density, Wet, Very Strong Odor	
				Color Change to Moderate Brown at 20-feet BGS	



0
5
10
15
20
25
30
35
40

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated

First Occurrence of Groundwater 15-feet BGS
Static Groundwater Level

Reviewed By:

FILE

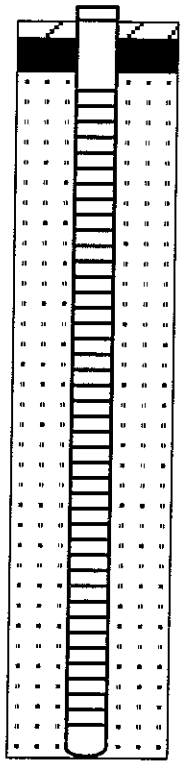
MONITORING WELL LOG MW-2

PROJECT No: RMA01.001
SITE: 55 Todd Road
CLIENT: R. M. Associates

DATE: July 9, 2004
LOGGED BY: Rebekah A. Westrup
CONTRACTOR: Cascade Drilling Inc

EASTING: 6356567.03
NORTHING: 1903695.65
ELEVATION: 104.67

	WATER LEVEL	SAMPLE	PID (ppmv)	LEGEND	DESCRIPTION	WELL
0					Ground Surface	
					ASPHALT	
5					CLAY trace Silt, Dark Yellowish Brown, Largely Plastic, Soft, Damp, No Odor	
10						
15					Sandy Very Fine to Fine Grain GRAVEL with Silt, Sands Very Fine to Coarse Grain, Dark Grayish Green, Loose, Moist, Slight Odor	
20	First Water				Color Change to Dark Yellowing Brown at 20-feet BGS, Saturated	
25						
30						
35						
40						



NOTES

Descriptions are based on observations and hand testing of grab samples Mechanical Tests were not performed unless otherwise stated

First Occurrence of Groundwater 15-feet BGS
Static Groundwater Level

Reviewed By:

FILE

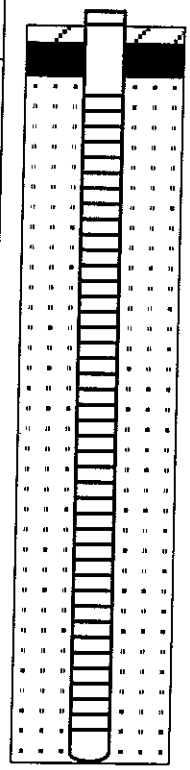
MONITORING WELL LOG MW-3

PROJECT No: RMA01.001
SITE: 55 Todd Road
CLIENT: R. M. Associates

DATE: July 8, 2004
LOGGED BY: Rebekah A. Westrup
CONTRACTOR: Cascade Drilling Inc.

EASTING: 6356500.76
NORTHING: 1903721.16
ELEVATION: 104.87

WATER LEVEL	SAMPLE	PID (ppmv)	LEGEND	DESCRIPTION	WELL
				Ground Surface	
				ASPHALT	
				Silty Fine Grain SAND with Clay, Pale Yellowing Brown, Fine Grained, Moderate Density, Dry, No Odor	
				Silty CLAY, Pale Yellowish Brown, Largely Plastic, Soft, Damp, No Odor	
				Sandy Very Fine to Fine Grain GRAVEL, Sands Very Fine to Very Coarse Grain, Dusky Yellowish Green, Loose, Damp, No Odor	
First Water				SAND, Very Fine to Very Coarse Grained, Gray, Loose, Saturated, No Odor	



0
5
10
15
20
25
30
35
40

NOTES

Descriptions are based on observations and hand testing of grab samples. Mechanical Tests were not performed unless otherwise stated.

First Occurrence of Groundwater 20-feet BGS
Static Groundwater Level

Reviewed By:

FILE

MONITORING WELL LOG MW-4

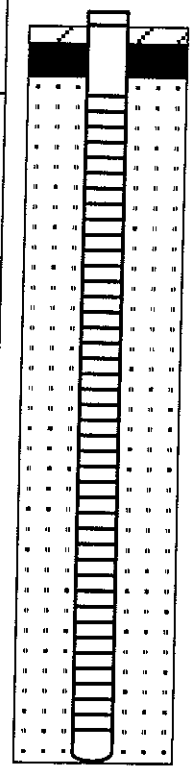
SHEET 1 of 1

PROJECT No: RMA01.001
SITE: 55 Todd Road
CLIENT: R. M. Associates

DATE: July 8, 2004
LOGGED BY: Rebeka A. Westrup
CONTRACTOR: Cascade Drilling Inc

EASTING: 6356500.76
NORTHING: 1903751.20
ELEVATION: 105.94

	WATER LEVEL	SAMPLE	PID (ppmv)	LEGEND	DESCRIPTION	WELL
0					Ground Surface	
					ASPHALT	
					No Recovery	
5						
10					Sandy CLAY with Silt, Grayish Olive, Very Dense, Dry, No Odor	
15						
20	First Water				Clayey SAND, Fine to Medium Grain, Grayish Olive Green, Dense, Wet, No Odor	
25						
30						
35						
40						



NOTES

Descriptions are based on observations and hand testing of grab samples Mechanical Tests were not performed unless otherwise stated

First Occurrence of Groundwater 20-feet BGS
Static Groundwater Level

Reviewed By:

FILE